Supreme Court, U.S.
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No. 93-1594 APR 4 1994

OFFICE OF THE CLERK

IN THE

Supreme Court of the United States

OCTOBER TERM, 1993

GOLDEN VALLEY MICROWAVE FOODS, INC.,
Petitioner,

v.

WEAVER POPCORN COMPANY, INC., and AMERICAN PACKAGING CORPORATION,
Respondents.

PETITION FOR WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

PETITION FOR WRIT OF CERTIORARI

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QUESTION PRESENTED

When the standard of appellate review is abuse of discretion and the exercise of discretion has been based on the cumulative effect of several factors, one or more of which can be shown to involve clear and fundamental error of law or fact, must the reviewing court vacate and remand for a fresh exercise of discretion freed from the taint of error?

PARTIES TO THE PROCEEDING

The names of all parties appear in the caption, except for Beatrice/Hunt Wesson, Inc., which settled and was dismissed from the action before trial. ConAgra, Inc. has been the parent of the petitioner, Golden Valley Microwave Foods, Inc., since 1991.

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OPINIONS BELOW

The judgment of the United States Court of Appeals for the Federal Circuit, entered without opinion pursuant to Fed.Cir.R.36, is reported at 11 F.3d 1072. The opinion of the United States District Court for the Northern District of Indiana is reported at 837 F.Supp. 1444. The appellate judgment and district court opinion are reprinted in the appendix hereto.

JURISDICTION

The judgment of the court of appeals was entered November 2, 1993. A timely petition for rehearing was denied January 3, 1994. The jurisdiction of this Court is invoked under 28 U.S.C. §1254(1).

STATUTORY PROVISIONS INVOLVED

35 U.S.C. §102. Conditions for patentability; novelty and loss of right to patent.

A person shall be entitled to a patent unless--

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

STATEMENT OF THE CASE

After a separate trial directed solely to the issue, the district court, having jurisdiction under 28 U.S.C. §1338(a), entered judgment holding two Golden Valley patents ('513 and '765) unenforceable due to inequitable conduct occurring in connection with the applications for patent. (A97). The inequitable conduct found below consisted of withholding

from and misrepresenting material information to the patent examiner who allowed the patents. The district court inferred the key element of intent to deceive because it found there were "too many instances of withholding of material information for any conclusion to be reached other than that the withholdings and mischaracterizations were done with the intent to mislead the Patent Office." (A78).

The Federal Circuit applies an abuse of discretion standard in reviewing lower court findings of inequitable conduct. *Kingsdown Medical Consultants, Ltd. v. Hollister, Inc.*, 863 F.2d 867, 876 (Fed. Cir. 1988). On appeal, Golden Valley contended that the district court committed fundamental errors of law and fact which led to its unwarranted inference of intent to deceive and tainted the exercise of its discretion. Relying upon the authority of this Court, expressed in *Platt v. Minnesota Mining & Mfg. Co.*, 376 U.S. 240 (1964), it argued that the propriety of the exercise of discretion could not be effectively reviewed if material error were found in *any* important factor relied upon by the district court in its exercise of discretion and inference of intent to deceive. Following *Platt*,[1] it argued that the judgment should be vacated and remanded with directions

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[1]/ In *Platt*, the district court considered and balanced ten separate factors as justifying exercise of its discretion to deny transfer. On appeal, *one* of the factors was described as "wholly out of bounds," although the other nine were found to be "appropriate." The court of appeals reversed, based on the error, and ordered transfer. On certiorari, this Court held that the "function of the Court of Appeals . . . was to determine the appropriate criteria and then leave their application to the trial judge on remand." 376 U.S. at 245. In other words, it was to be left to the trial judge to reconsider transfer with the one impermissible and potentially tainting factor excluded from the ten otherwise properly considered.

for the district court to exercise its discretion anew, freed from the taint of error. Golden Valley's Summary of Argument to the Federal Circuit is set out in the Appendix. (A100-103).

Despite the fact that serious errors are plain from the face of the district court's opinion, the court of appeals summarily affirmed the exercise of discretion, without opinion. (A1). From this, it must be presumed that the court of appeals recognized the plain errors, but concluded enough remained in any event to justify the district court's exercise of discretion and inference of intent. In so concluding, Golden Valley submits that the court of appeals impermissibly substituted its discretion for that of the trial judge in violation of this Court's admonition in *Platt*. In so concluding without an opinion, the court of appeals also may have obfuscated effective review by this Court and put its stamp of approval on the plain errors of law. In view of the impact of this decision on an entire industry and the magnitude of the issues presented, a Rule 36 disposition was not warranted.

The basis for this petition is that appellate review in abuse of discretion cases frequently usurps the prerogatives of the district court and ignores the principles set out in *Platt*. It is respectfully submitted that *Platt* correctly states the law and should be enforced. In this regard, it makes no difference whether the usurpation results in an affirmance despite the errors below or reversal because of them. In the circumstances of this action, Golden Valley asks that the Court grant its petition and either order the district court's judgment vacated or, as in *Taylor v. McKeithen*, 407 U.S. 191, 194 (1980), remand for lack of benefit of the Federal Circuit's insight on this important issue.

REASONS FOR GRANTING THE WRIT

To understand the context of the "withholdings," it is necessary to provide a brief background. Important commercial embodiments of the Golden Valley patents include microwave popcorn bags which encapsulate a metallized plastic film that becomes very hot when subjected to microwaves. (A34-36). This flexible laminate aids in quickly heating the popping oil and provides superior quality and volume of popped kernels. Golden Valley's microwave popcorn is sold under the Act II® brand. Licensed bags are also sold under the Pop Secret® brand (General Mills) and Orville Redenbacher® brand (Hunt-Wesson). Golden Valley's development, starting with a three-man company, founded a new industry and has led to sales of microwave popcorn in the amount of billions of bags per year.

Microwave popcorn bags of the two-ply type in which Golden Valley's flexible laminate is incorporated were known before Golden Valley's invention. Such bags had been described in patents owned by Pillsbury and by Golden Valley, and Golden Valley provided copies of these patents to the patent examiner. That a metallized plastic film would heat when subjected to microwave energy was known, and this was described in patents owned by General Mills. Golden Valley also provided copies of the General Mills patents to the patent examiner. Further, the fact that the films, which were naturally unstable when heated, could be stabilized by being bonded to rigid paperboard and could be used in microwave cartons, if in direct contact with the food, to heat pizza and popcorn was known and disclosed in patents owned by James River. Golden Valley provided copies of those patents to the patent examiner. In fact, all of this important prior art was voluntarily disclosed to the patent examiner by Golden Valley. (A104-07).

What no researcher had done before Golden Valley was to demonstrate that a metallized plastic film could be stabilized in and by flexible packaging materials such as bags. Golden Valley discovered that it was not essential to use rigid paperboard cartons to stabilize the heater film and that the film could be separated from contaminating contact with the food product (*e.g.*, popcorn) by an insulating barrier of flexible paper and still be able to provide the desired heating without causing the paper to burn, smoke, or smell.

Fundamental errors of law characterize the district court's entire approach to the case. It's first and most pervasive error lies in its failure to assess the meaning of critical terms used in the patents to define the Golden Valley invention and to distinguish its contribution from those of others who had gone before. No analysis can succeed without this assessment, *Panduit Corp. v. Dennison Manufacturing Co.*, 810 F.2d 1561, 1576 (Fed. Cir. 1987), on remand from this Court's decision at 475 U.S. 809 (1986), yet while the district court quoted certain of Golden Valley's patent claims which define the invention (A23-25, 34-36), it did not construe the meaning of key terms in those claims.

For example, the requirement that the laminate must be *flexible* defines Golden Valley's advance in the art and distinguishes its technology from that of James River, whose metallized film was bonded to *rigid* paperboard. (A106-08). Nevertheless, instead of construing the meaning of "flexible" in accord with the functional definition provided on the face

of the Golden Valley patents,[2] as it was obligated to do, *Panduit, supra,*, the district court made a novice's error of boiling the invention down to a gist or "concept" (A30, 75) which encompassed the James River prior art. *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1547 (Fed. Cir. 1983); *Jones v. Hardy*, 727 F.2d 1524, 1527-28 (Fed. Cir. 1984); *Halliburton Co. v. Schlumberger Technology Corp.*, 925 F.2d 1435, 1440-43 (Fed. Cir. 1991). (A30, 75). This error of broadly mis-defining the invention opened the door to the district court's mistaken assessment of the pertinence of "withheld" information.[3]

Similarly, by disregarding the patents' requirement that the susceptor be made of a thermally "unstable plastic film" the district court erroneously believed that patents disclosing a heater made from a salt and water paste (A9) or even a

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[2]/ The term, "flexible" laminate, is functionally defined in the Golden Valley patents as being processable in a continuous web through conventional flexible packaging machinery such as used to make bags. (A111). This important characteristic distinguishes flexible packaging from carton packaging where the package is cut into blanks and then folded along score lines.

[3]/ Relying upon its mistaken notion of the "concept" of the invention (barren of the actual language used by Golden Valley to define it), the district court went so far as to find that Golden Valley had "unlawfully" claimed prior art technology of James River (A97). This finding flies in the face of James River's own admission that its research had led it to the "firm conclusion" that "highly flexible" microwave food wraps were "not commercially operable" and that a "semirigid or rigid substrate" (*i.e.*, paperboard) was mandatory to stabilize metallized film upon microwave heating. (A108). In fact, overcoming that negative teaching, which severely limited the use of the metallized film, was a substantial factor in Golden Valley's invention. The value of this contribution is evidenced by the fact that James River took a license to make bags under the patents here in suit.

cardboard insulating pad which has no heating ability at all (A8) constituted material information. (A32). In fact, these patents had nothing to do with the problems created by use of thermally unstable thin plastic films, much less with the solutions to those problems.

A second fundamental error of law apparent from the face of the opinion lies in the district court's failure to measure the relative pertinence of the disclosures in the patents which Golden Valley furnished to the patent examiner against the "withheld" information. This was error of law, because cumulative or less material information need not be cited. *Halliburton Co. v. Schlumberger Technology Corp.*, 925 F.2d 1435, 1440, 1443 (Fed. Cir. 1991).

A third fundamental error of law apparent from the face of the opinion lies in the district court's belief that there is an obligation to call particular attention to passages in documents which are provided for the patent examiner's consideration. (A94). No such duty exists because the Federal Circuit has held that information in a document placed before the examiner cannot be deemed to have been withheld. *Scripps Clinic & Research Foundation v. Genetech, Inc.*, 927 F.2d 565, 1582 (Fed. Cir. 1991); *Kingsdown Medical Consultants, Ltd. v. Hollister, Inc.*, 863 F.2d 867, 874 (Fed. Cir. 1988); *Northern Telecom, Inc. v. Datapoint Corp.*, 908 F.2d 931, 938 (Fed. Cir. 1990).

The above district court errors of law made it impossible for the court properly to evaluate the materiality of the "too many instances of withholding" from which it inferred intent to deceive.

Other important errors influencing the district court's inference of intent to deceive include:

- Its erroneous finding, under the heading "Nondisclosure of Prior Art," that Golden Valley deliberately withheld a Japanese published document from the patent

examiner (A36), despite the fact that the document's actual date of publication (A22) was long after Golden Valley's filing date and thus could not constitute citable prior art against the Golden Valley patents (35 U.S.C. §102(a));

- Its erroneous holding that a Golden Valley declaration was fraudulent because it did not identify an abandoned patent application as "prior art" (A69-70), when in fact an abandoned application is not publicly available and cannot constitute prior art as a matter of law (35 U.S.C. §102(a)); and
- Its erroneous finding that certain tests reported to the patent examiner were unfairly biased because they compared machine-made bags with handmade bags, despite its being plain from the face of bags actually compared that they were all handmade. (A109-10).[4]

If, as petitioner contends, the district court committed clear and fundamental error in assessing important factors taken into account when it inferred intent to deceive based on "too many instances of withholding" and exercised its discretion to find inequitable conduct based on that inference, the Federal Circuit was obliged to vacate the judgment and remand to allow the trial judge to exercise his discretion anew, freed from the taint of the erroneous factors he had previously weighed in the balance. That is the holding of *Platt v. Minnesota Mining & Mfg. Co.*, 376 U.S. 240, 244-45 (1964), and the Federal Circuit's ignoring of *Platt* was error.

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[4]/ This fact can be seen by physical cutouts necessarily present when the bags are made by hand and was physically demonstrated by Golden Valley's technical expert at trial, using the actual bag test samples. The only machine-made bags in the tests were those used as a *control* to determine *if* machine-made bags had any advantage over handmade bags.

Petitioner submits, however, that more is at stake than just whether error was committed here. This case presents a timely vehicle for reconciling the varied standards of appellate review applied to numerous and varied issues where abuse of discretion is the focus of inquiry.

In 1982, Judge Friendly observed that there are many definitions of "abuse of discretion" ranging from those that "would require the appellate court to come close to finding that the trial court had taken leave of its senses to others which differ from the definition of error by only the slightest nuance . . . ." His suggested reconciliation of these varying standards was that some cases (*e.g.*, setting the amount of a bond or determining the order of trial) justify a broad discretion, while in others (*e.g.*, granting of a preliminary injunction) the discretion should be narrowly construed. *See* Friendly, *Indiscretion About Discretion*, 31 Emory L.J. 747, 763-64 (1982).

Judge Friendly's suggested reconciliation may have merit, but it has not been articulated by the appellate courts. Some circuits have broadly defined the abuse of discretion as residing only in a judgment which is "clearly unreasonable, arbitrary or fanciful." *Northrop Corporation v. McDonnell Douglas Corporation*, 751 F.2d 395, 399 (D.C. Cir. 1984). Others have opined that abuse arises from a judgment "based" on an erroneous conclusion of law, *Ariel v. Jones*, 693 F.2d 1058, 1060 (11th Cir. 1982), or based on clearly erroneous findings, *Deitchman v. E.R. Squibb & Sons, Inc.*, 740 F.2d 556, 564 (7th Cir. 1984).

Other views on what constitutes an abuse of discretion are expressed in *Kern v. TXO Production Corporation*, 738 F.2d 968, 970 (8th Cir. 1984):

> "An abuse of discretion. . .can occur in three principle ways: when a relevant

> factor that should be given significant weight is not considered; when an irrelevant or improper factor is considered and given significant weight; and when all proper factors, and no improper ones, are considered, but the court, in weighing those factors, commits a clear error of judgment."

In contrast, Judge Learned Hand, speaking for the Second Circuit, believed the reviewing court should not reverse on abuse of discretion unless "our conviction is definite" that the exercise was "not within permissible limits." *Barnett v. Equitable Trust Co.*, 34 F.2d 916, 920 (2d Cir. 1929).

In *PPG Industries, Inc. v. Celanese Polymer Specialties Co., Inc.*, 840 F.2d 1565, 1570-72 (Fed. Cir. 1988), the Federal Circuit attempted to reconcile the standards it and other circuits have applied in dealing with this "verbal coat of. . .many colors." It first noted "a potential inconsistency in the law of this circuit" regarding the standard of appellate review in abuse of discretion cases and concluded that as "applied" there was no inconsistency. According to the analysis in *PPG Industries*, "if the error did not actually form the *basis* for the determination appealed, no abuse of discretion will have occurred because the error is harmless." (840 F.2d at 1572, emphasis added). If, as expressed in *PPG Industries*, abuse of discretion can only be found when the discretion is *based* on error (meaning that *all* factors considered must be found to be erroneous and anything less is "harmless error"), then the law of the Federal Circuit cannot be reconciled with this Court's holding in *Platt v. Minnesota Mining & Mfg. Co.*, 376 U.S. 240, 244-45 (1964).

Presumably, the Federal Circuit applied the *PPG Industries* standard of review here and found the plain errors pointed out above[5] to be harmless because there were sufficient other factors upon which the exercise of discretion *could* have been based to warrant summary affirmance. In doing so, the court of appeals erroneously substituted its discretion for that of the trial judge, for as this Court made clear in *Platt*, an appellate court may not assume how the trial judge would exercise his discretion if a substantial reason for his decision was negated by error.

It is noteworthy that the *Platt* principle did not enter into the reasoning of any of the above court of appeal's decisions, although the Eighth Circuit in *Kern*, quoted above, seems to have followed the principle in substance (abuse occurs when an "improper factor is considered and given significant weight"). On the other hand, the D.C. Circuit has expressly acknowledged the *Platt* principle (abuse can be shown if the district court "considered an improper factor"). *In re Scott*, 709 F.2d 717, 719 (D.C. Cir. 1983), quoting from *Jones v. Gasch*, 404 F.2d 1231, 1242 (D.C. Cir. 1967).

Platt also has been aptly acknowledged by Judge Friendly in a concurring opinion regarding review of abuse of discretion by mandamus in transfer motions. With respect to the inclination of appellate courts to substitute their own discretion for that of the trial judge *via* mandamus, he noted that, "Appellate courts die hard in relinquishing powers stoutly asserted but never truly possessed; like generals, they prefer to fade away." *A. Olinick & Sons*

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[5] Petitioner has not attempted here to illusidate all of the errors below, but merely those which were most plain and which had a cascading influence on all factors considered by the district court.

v. Dempster Brothers, Inc., 365 F.2d 439, 445, 448 (2d Cir. 1966).

The point made in *Platt* but seemingly missed by the Federal Circuit and many other reviewing courts is that while an abuse of discretion standard is appropriate for review of decisions sounding in equity that require the weighing and balancing of multiple complex factors (such as are present in inequitable conduct issues), when one or more important factors improperly enter into the balance, the discretion does not shift from the trial judge to the appellate court. The discretion is his or hers alone to exercise and if an important error has been made, the case must go back for exercise anew by the trial judge, freed of the potentially tainting error.

In the present case, it is of no moment that the district court's judgment was affirmed rather than reversed. If error entered into the balance in a manner not inconsequential, as it did here, it is for the district court to determine what effect that error may have had on the final balance which he made and which he alone must remake in light of his error.

For the foregoing reasons, petitioner urges this Court to grant certiorari. Because serious errors made by the district court in the exercise of its discretion are plain from the face of the opinion, petitioner submits that it would be appropriate to remand to the Federal Circuit with instructions for it to vacate the district court's judgment. Alternatively,

petitioner asks that the Court remand to the Federal Circuit with instructions that it address the errors raised in the appeal below *via* a written opinion.

Respectfully submitted,

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April 4, 1994

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NOTE: Pursuant to Fed. Cir. R. 47.6, this disposition is not citable as precedent. It is a public record. The disposition will appear in tables published periodically.

UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT
93-1309

GOLDEN VALLEY MICROWAVE FOODS, INC.,
Plaintiff-Appellant,

v.

WEAVER POPCORN COMPANY, INC.
AND
AMERICAN PACKAGING CORPORATION,
Defendants-Appellees.

JUDGMENT

ON APPEAL from the UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF INDIANA
(FORT WAYNE)

in CASE NO(S). F 88-00251

This CAUSE having been heard and considered, it is ORDERED and ADJUDGED:

Per Curiam: (MAYER, and MICHEL, Circuit Judges, and SCHWARZER, Senior District Judge*):

AFFIRMED. See Fed. Cir. R. 36.

ENTERED BY ORDER OF THE COURT

November 2, 1993 /s/ Francis X. Gindhart, Clerk

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* Honorable William W. Schwarzer, Senior District Judge, United States District Court for the Northern District of California, sitting by designation.

UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

93-1309

GOLDEN VALLEY MICROWAVE FOODS, INC.,
Plaintiff-Appellant,

v.

WEAVER POPCORN COMPANY, INC.
AND
AMERICAN PACKAGING CORPORATION,
Defendants-Appellees.

ORDER

ORDERED that the petition for rehearing be, and the same hereby is, DENIED and it is further

ORDERED that the suggestion for rehearing in banc be, and the same hereby is, DECLINED.

The mandate of the court will issue on January 10, 1994.

FOR THE COURT
FRANCIS X. GINDHART, CLERK

Dated: January 3, 1994

By: s/Diane M. Frye
Chief Deputy Clerk

APPENDIX B

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF INDIANA
FORT WAYNE DIVISION

GOLDEN VALLEY MICROWAVE FOODS, INC.,

Plaintiff,

v. CIVIL NO. F 88-251

WEAVER POPCORN COMPANY, INC., and AMERICAN PACKAGING CORP.,

Defendants.

MEMORANDUM DECISION AND ORDER

This matter is before the court for a decision on the merits following a bench trial. On August 22, 1988 Golden Valley Microwave Foods, Inc. (Golden Valley) commenced an action against Weaver Popcorn Company, Inc. (Weaver) for patent infringement. Weaver filed its answer, affirmative defenses, and counterclaims on November 2, 1988. Count I of Weaver's counterclaim alleged, inter alia, fraud and/or inequitable conduct on the part of Golden Valley before the United States Patent and Trademark Office (the Patent Office). On August 9, 1989 the court granted the

motion of Beatrice/Hunt Wesson, Inc. (Hunt-Wesson) and American Packaging Corp. (American Packaging) to intervene as defendants in this action. On November 21, 1989 Golden Valley filed an amended complaint against all three defendants for the purpose of adding a newly issued patent to its infringement charges against the defendants. On April 19, 1991 a stipulated order was entered in which Golden Valley's amended complaint was dismissed with respect to Hunt-Wesson.

By order entered July 9, 1991, this court granted the motion of defendant Weaver to bifurcate the case and try separately the issue of whether Golden Valley committed inequitable conduct before the Patent Office in the process of obtaining patents 4,735,513 ('513) and/or 4,878,765 ('765), the two patents in suit in this litigation. The trial of this issue commenced on January 21, 1992, with the defendants proceeding to present their case-in-chief first, and the court heard final arguments on February 5, 1992. The final post-trial filings were submitted to the court on May 15, 1992. The following Findings of Fact and Conclusions of Law are entered pursuant to Federal Rule of Civil Procedure 52(a), after having carefully studied the record and after having determined the credibility of the witnesses.

Summary of Defendants' Claims

Defendants Weaver Popcorn Company, Inc. and American Packaging Corporation have claimed that Golden Valley committed several acts of inequitable conduct. With

respect to the '513 patent, defendants claim: (a) that Golden Valley failed to disclose a materially-related prior patent application, 612,723 ('723 application), which had been twice rejected by the Patent Office and which contained materially inconsistent representations and important prior art that was withheld during the prosecution of the '513 and '765 patents; (b) that Golden Valley filed a materially misleading affidavit in August, 1987 which caused the '513 patent to issue; (c) that Golden Valley failed to disclose its litigation with James River Corporation; and (d) that Golden Valley failed to disclose material prior art.

With respect to the second patent in suit, the '765 patent, defendants claim that Golden Valley: (a) continued to conceal the '723 application and its prosecution history; (b) failed to correct the August, 1987 affidavit and compounded the material misrepresentations in that affidavit; and (c) withheld material prior art.

Findings of Fact

I. Early Developments

The inventors listed in the '513 and '765 patents, Mr. James Watkins, Mr. David Andreas and Mr. David Cox, are or were employees of Golden Valley who, prior to their employment by Golden Valley, were employed by the Pillsbury Company where they were involved with the

design, development and/or marketing of microwave popcorn[1]. Lawrence Brandberg, who was involved with preparing various Affidavits and Declarations regarding "comparative testing" in the '513 and '765 applications, was also a former employee of the Pillsbury Company as was James Harmon, Golden Valley's independent patent counsel. At Pillsbury, Mr. Harmon was an in-house patent counsel and worked with Messrs. Watkins, Andreas, Cox and Brandberg[2]. Plaintiff's expert witness, Charles Turpin, who is presently employed by Golden Valley, was also a former employee of the Pillsbury Company[3].

In the early to mid 1970's the Pillsbury Company introduced its microwave popcorn bag in which an inner ply of greaseproof paper was adhesively laminated (bonded) to an outer ply of kraft paper without any microwave interactive material. Golden Valley sold ready-to-pop popcorn in this bag during the 1970's and early 1980's and it enjoyed some commercial success. The construction of Golden Valley's ready-to-pop popcorn bag corresponded to the structure disclosed in the Brandberg et al. 3,973,045 ('045) patent, of which Mr. Andreas was a co-inventor[4].[5] For

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[1] Brandberg D.T. pp. 24-27; Andreas T.T. 1/21/92 pp. 59-61, 64, 65.

[2] Andreas T.T. 1/21/92 p. 65; Harmon T.T. 1/23/92 p. 177.

[3] Turpin T.T. 1/30/92 p. 197; Andreas T.T. 1/21/92 p. 65.

[4] The Brandberg '045 patent was filed in 1983 and issued in 1976. It is assigned to the Pillsbury Co.

example, under the heading "Summary of the Invention" the Brandberg '045 patent states:

> The package includes a flexible and expandable body such as a gussetted bag formed from two plys of paper. The package has no openings or vents of any kind so that steam given off while heating will expand the bag.

Further, under the heading "Preferred Embodiments" the Brandberg '045 patent states:

> The package preferably consists of two layers of flexible sheet material. One preferred outer sheet material is bleached kraft paper. A suitable liner 24 consists of glasine paper.

Col. 2, l. 29-32.

All of the former Pillsbury employees who later associated with Golden Valley (Messrs. Harmon, Andreas, Watkins, Cox, Brandberg, and Turpin) were thoroughly familiar with the Pillsbury nonsusceptor popcorn bag, and Messrs. Andreas, Harmon, and Brandberg were familiar with experimentation Pillsbury had conducted in the area of susceptor technology (the microwave interactive material that

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[5] Pre-trial Order Stip. 1; Andreas T.T. 1/21/92 pp. 82-95.

reacts in the presence of microwave energy to absorb and transfer heat)[6]. On March 22, 1982 Mr. Andreas had obtained copies of the Borek 4,219,573 ('573) and Winters 4,283,427 ('427) patents for "informational purposes" from Mr. Borek[7].[8] The Abstract of the Borek '573 patent describes the invention as follows:

> A package for popping popcorn in a microwave oven is provided. The package includes an expandable container adapted to contain popcorn, oil and salt which when exposed to microwave radiation, the oil and popcorn will become heated and the popcorn will pop (steam produced by the heating will expand the container to accommodate the popped popcorn). The container has one wall with a thermal insulating pad associated therewith which improves the popping performance of the popcorn by preventing heat loss from the package to the oven floor.

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[6] Andreas T.T. 1/21/92 pp. 95-97; Harmon T.T. 1/23/92 pp. 191-196; Brandberg D.T. p. 12.

[7] The Borek '573 patent was filed in 1979 and issued in 1980. It is assigned to the Pillsbury Co. The Winters '427 patent was filed in 1978 and issued in 1981. It is also assigned to the Pillsbury Co.

[8] DX-156; Andreas T.T. 1/21/92 pp. 132-139.

The Abstract of the Winters '427 patent describes the invention as follows:

> A microwave heating package, and a method of microwave heating. Both the package and the method employ a lossy chemical susceptor which upon continued exposure to microwave radiation becomes substantially microwave transparent, thus building into the system a unique maximum temperature shut off at the point at which the chemical susceptor becomes microwave transparent. The chemical susceptor is comprised of a combination of a solute, such as inorganic salts of Group IA and IIA, and a polar solvent for the solute, such as water. The chemical susceptor may be composed of a hydrated form of the inorganic salts. The package, method and chemical susceptor may be used for microwave heating of many products, including among others, food products.

Golden Valley's employees became familiar with Pillsbury's commercial pizza product, Totino's Pizza, in approximately July of 1982. Totino's Pizza was sold in a package in which susceptor material (which acts as a heat conductor) was adhesively attached to a sheet of paper and/or paperboard material for bonding to the top of a flat pizza tray insert. The function of the susceptor was to concentrate heat under the pizza and thereby prevent the

pizza from becoming soggy when cooked in a microwave oven[9]. One version of the Pillsbury pizza product comprised a tray in which the susceptor material was adhesively bonded directly to paperboard. Another version existed at the same time in which the susceptor material was first bonded to a paper backing, which was, in turn, bonded to a paperboard tray. Golden Valley immediately contacted James River Corporation (James River), the manufacturer of the package for Totino's Pizza, to discuss obtaining James River's "heater pad" (known as the Qwik Crisp technology)[10]. Golden Valley was informed that the Qwik Crisp technology would not be made available to them at that time.

Later, in October of 1983, Golden Valley became aware of the Wyandot commercial popcorn container in which a susceptor material similar to the Pillsbury pizza susceptor was bonded to a preliminary piece of paper which, in turn, was bonded to the inside of the paperboard package. This susceptor was directly positioned under a charge of popcorn and oil. The Wyandot popcorn container was sold commercially and therefore Golden Valley assumed that the container was "commercially acceptable"[11]. After seeing the Wyandot container on the market, Golden Valley again

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[9] Cox T.T. 1/23/92 pp. 97, 98; Andreas T.T. 1/21/92 pp. 113-121, 122, 123.

[10] Andreas T.T. 1/21/92 pp. 122-125, 128-129.

[11] Cox D.T. pp. 35-37; Andreas T.T. 1/21/92 pp. 141-151.

contacted James River and inquired about the availability of the Qwik Crisp product.

Golden Valley finally obtained the Qwik Crisp susceptor-paper heater roll stock product from James River in March or April of 1984, enabling Golden Valley to experiment with the placement of such susceptor-paper constructions in various portions of their conventional popcorn bag[12]. Golden Valley conducted tests on the placement of James River's Qwik Crisp heater pad product on the inside of its popcorn bag, on the outside of its popcorn bag, and between the two plies of its popcorn bag. In October of 1984, Golden Valley publicly introduced its ACT II bag in which susceptor material was bonded between the plies of its conventional popcorn bag[13].

II. The '723 Application

On May 21, 1984, Attorney Harmon filed U.S. Patent Application Serial No. 612,723 ('723 application)[14]. The '723 application was Golden Valley's first patent application filed with respect to the utilization of a susceptor patch in a

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[12] Andreas T.T. 1/21/92 pp. 156-168, T.T. 1/22/92 pp. 8-9; DX-408A; DX-468.

[13] DX-39; DX-413; DX-632; DX-633; Andreas T.T. 1/21/92 pp. 158, 167-168, 178-186, T.T. 1/23/92 pp. 43-44, 67-68, 150-155; Harmon T.T. 1/23/92 pp. 210-215, 218, T.T. 1/24/92 pp. 92-96.

[14] DX263.

food package. This application listed Mr. Watkins as the sole inventor[15]. The '723 application was entitled "Popcorn Package" and its stated field of invention was "packaged foods and more particularly a package for popping corn in a microwave oven."[16]

The preferred embodiment of the invention shown in the '723 application is, in part, as follows:

> The embodiment of Figures 1 and 2 comprises a package 10 composed of a bag 12 formed from flexible sheet material such as paper. . . .
>
> * * *
>
> Positioned adjacent to the panel 26 which serves as the lower or bottom panel during the heating operation is a microwave pickup sheet 27. Sheet 27 is flexible and foldable and is composed of a plastic film having a microwave receptive metallic material 29 thereon (Figure 11). The microwave receptive material 29 is characterized by becoming hot when exposed to microwave

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15 DX263, p. D4.

16 DX263, p. D5.

energy. The sheet 27 and metallic layer 29 may, if desired, be bonded to a paper backing 31 which serves as a support and the entire laminate composed of the film, the metallic layer 29 and the backing 31 is secured preferably by adhesive bonding to the lower wall panel 26 of the bag as shown in Figures 2, 7, 8 and 9. The inductive sheet 27-29 is present at least in the portion of the bag where the charge of fat and corn 32 is located and is in heat transfer relationship therewith. The sheet 27-29 is bonded to the lower wall 26 of the bag and is supported thereby to remain in place and to substantially line the pool of hot fat in which the corn is suspended during the cooking operation.

* * *

The metal coating 29 is usually very thin, transparent or semitransparent but partially reflective of light. It can be formed, for example, by vacuum metalizing a plastic film such as a polyester film. Various metals can be

used such as aluminum, copper, gold and various ferrous materials.

* * *

While the inductive sheet has been shown laminated to a paper backing 31 in Figure 11, it should be understood that the paper backing is optional, provided, however, the plastic sheet 27 is in some way supported dimensionally, for example, by bonding it directly to the wall 26 of the bag.

* * *

As shown best in Figures 3 and 4, a package 40 is provided comprising a bag formed from flexible sheet materials such as paper preferably with a greaseproof paper liner of suitable known construction . . . .

* * *

Many variations of the invention within the scope of the appended claims will be apparent to those skilled in the art. For example, the term "metallic

> material" may include metal compounds such as iron oxide, tin oxide, etc. and the pickup sheet can be loose in the bag and held in by the weight of the product or bonded between plies or to the outside of the bag.

Mr. Harmon acknowledged that, in view of the '723 specification and claims, it would be apparent to one of ordinary skill to place the susceptor between the plies of a conventional popcorn bag[17].

The '723 application disclosed that Golden Valley had obtained the susceptor-backing sheet product from James River. The specific susceptor-paper laminate was stated to be "composed of metallized plastic sheet 0.5 mil bonded to paper backing, product from James River Corp. of Kalamazoo, Mich." In the formation of Golden Valley's popcorn bag, James River's susceptor was "bonded to the inside of the lower surface of the bag."[18] During the prosecution of the '723 application, Mr. Harmon argued that the invention that was disclosed, claimed, and tested therein, in both bonded and stripped susceptor embodiments, achieved increased pop volume without charring or shrinkage of the susceptor and with little or no burning, scorching,

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[17] Harmon T.T. 1/23/92 pp. 220-227.

[18] DX-263, D015.

or shriveling of that inductive layer[19]. Mr. Harmon carefully disclosed, in the '723 application, the prior art '045 Brandberg patent as being representative of the prior art[20].

The '723 application was assigned to and examined by Patent examiner Steven L. Weinstein[21]. Examiner Weinstein was knowledgeable concerning susceptor and bag technology, having examined a number of patents in this area. (E.g. Watkins U.S. Pat. No. 4,585,826; Watkins U.S. Pat. No. 4,450,180; McHam U.S. Pat. No. 4,292,332; Borek U.S. Pat. No. 4,219,573; Brandberg U.S. Pat. No. 3,973,045). Examiner Weinstein rejected each and every one of the claims of the '723 application in an Office Action dated November 14, 1984[22]. Examiner Weinstein made detailed findings as to why the invention claimed in the '723 application was not patentable, and he specifically rejected the patent application because the invention was obvious under 35 U.S.C. §103[23]. Examiner Weinstein's rejection was based upon obviousness in light of a series of patents,

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19 DX263, D012, D044-D051; Andreas T.T. 1/21/92 pp. 167, 178-186; Harmon T.T. 1/23/92 pp. 206-241, T.T. 1/24/92 pp. 19-25, 26-39, 92-96, 102, 106, 119-121, 145, 158, 188, 209-210; Burnett T.T. 1/29/92 pp. 170-186, 194 223, 226-227, T.T. 1/30/92 pp. 14- 25.

20 DX-263, D006, ls. 1-2.

21 DX263, p. D30-D34.

22 DX263, pp. D30-D37.

23 Id.

including the McHam 4,292,332 patent, the Brandberg '045 patent, the Teich et al 4,156,806 patent, the Brastad et al 4,230,924 patent, the Brastad et al 4,267,420 patent, and the Bowen et al 4,158,760 patent[24].

Examiner Weinstein also rejected all claims in the '723 application as being obvious in view of Brastad, Teich, and Bowen, supra[25], and in view of Golden Valley's own patent issued to Mr. Watkins, U.S. Pat. No. 4,450,180. The Watkins '180 patent was titled "Package for Increasing the Volumetric Yield of Microwave Cooked Popcorn" and the Summary of the Invention is as follows:

> Briefly the invention provides a package and method for popping corn within a dual purpose shipping and popping container, e.g. a bag, with increased volumetric yields of popped corn. One aspect of the invention is the provision of a package formed from flexible sheet material of collateral tubular configuration, that is to say comprising two parallel longitudinally extending sections communicating together at the center of the package. Substantially all of the charge of popcorn and fat is placed within one tubular section and

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24 Id.

25 Id.

the other is maintained free of popcorn. The package filled in this manner is positioned with the charge lowermost in the microwave oven. During popping the upper tubular section is free to expand as it fills with popcorn while the lower tubular section continues to hold unpopped corn and liquefied fat. Another aspect of the invention is the provision of a package as just described wherein one of the tubular bag sections is of a smaller cross-sectional size than the other. The change [sic] of corn and fat is placed in the tubular section of the smallest diameter. In one practical embodiment of the invention the package comprises a gussetted bag including a pair of face panels and interconnecting centrally projecting side gussets thereby defining the two tubular sections. The first face panel is of greater width than the second face panel. Typically the area of the smaller face panel is about 18% to 50% less than the area of the larger face panel.

The invention also discloses automated methods for filling packages in accordance with the invention in such a way as to properly locate the charge.

It was Examiner Weinstein's position that the addition of a microwave susceptor to the flexible bag described in the Watkins '180 patent was obvious.

On February 18, 1985 Mr. Harmon, on behalf of the applicants and Golden Valley, conceded the applicability of Examiner Weinstein's references and discussion of prior patents[26], but sought to amend the application[27]. Mr. Harmon withdrew independent claims 1 and 13, and amended the application to include new independent claim 14[28]. Claim 14 states, in pertinent part, that the invention consists of:

> a flexible and foldable microwave concentrating inductive pickup sheet [susceptor] only on the bottom of the compartment containing the charge, said inductive sheet being composed of a base material in sheet form having a flexible microwave inductor material thereon characterized by becoming hot to effect concentrated heating of a localized portion of the charge when exposed to microwave energy, the pickup sheet being substantially flat and being bonded to said paper sheet for

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[26] DX263, p. D46

[27] Id., p. D44

[28] Id.

> dimensional support to prevent shriveling and scorching during localized heating of a food. . . . [emphasis supplied].

The thrust of this new claim 14 was to locate the susceptor at the bottom of the bag[29].

On May 31, 1985, Examiner Weinstein rejected the new claim 14, as well as claims 2-12, in a lengthy, detailed series of findings[30]. Examiner Weinstein again concluded that prior art, particularly prior patents issued to McHam, to Brandberg, to Colman, to Teich, to Brastad (two patents), to Bowen, and to Turpin, made the claimed invention "obvious" to one of ordinary skill in the art[31]. Examiner Weinstein found, for example, that:

> the Brastad references do teach bonding the energy absorber directly to the remainder of the package whereas [sic]. Turpin et al teaches a flexible support structure for the microwave energy absorbing material. . . .[32]

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29 Id.

30 DX263, pp. D52-58.

31 Id.

32 Id., pp. D56-D57.

Examiner Weinstein carefully considered each of Golden Valley's arguments in favor of patent protection, and found them to be unconvincing and without support[33]. This rejection was made final and the final rejection was mailed to Golden Valley on June 10, 1985.

Upon receipt of the second rejection of the '723 application, Mr. Harmon abandoned further prosecution of the application[34]. On January 17, 1986 the Patent Office confirmed abandonment of the '723 application as a result of the applicants' failure to respond to the final Office Action rejecting that application[35]. The second and final Office Action[36] granted a three month shortened statutory period in which Mr. Harmon could have responded after the mailing date of June 10, 1985. Thus, the '723 application became formally abandoned on September 11, 1985, even though an appropriate response to the Office Action could have obtained extensions of up to three months beyond that date, January 11, 1986[37].

Applications on the subject matter of United States application Serial No. 612,723 were filed in Japan and

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[33] Id., pp. D53-D57.

[34] Harmon T.T. 1/27/92 pp. 181-183.

[35] DX263, D059.

[36] DX263, D052

[37] DX-263, D059; Harmon T.T. 1/23/92 p. 204, T.T. 1/24/92 pp. 37-41, T.T. 1/28/92 pp. 37-39; Burnett T.T. 1/29/92 p. 170.

Canada with the application being published in Japan on December 11, 1985, and issued as a patent in Canada on March 1, 1988.[38] More than one year after the '723 application had been abandoned and could not issue, Mr. Harmon deceptively represented to the Canadian examiner that, with respect to the '723 U.S. application, "no patent has yet issued."[39]

III. Concealment of the '723 Application

Golden Valley filed its application for the '513 patent on June 3, 1985. This patent, titled "Flexible Packaging Sheets", issued on April 5, 1988 and lists Messrs. Watkins, Andreas, and Cox as the inventors. For several months, from June 1985 to January 1986, the '723 and '513 applications were co-pending.[40]

The Abstract of the '513 patent describes the invention as follows:

> A flexible sheet structure is described which comprises a base sheet having a microwave coupling layer, e.g. electrodeposited aluminum as an island

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[38] DX623CC.

[39] DX623, sheet 9, line 12 and sheets 43-44.

[40] DX-261; DX-263; Harmon T.T. 1/24/92 pp. 37-41; Burnett T.T. 1/29/92 p. 170.

> covering a selected area of the sheet. The uncoated portions will not be heated and will not be damaged by microwave energy. The selectively located microwave coupling covered area transfers absorbed heat to a product by thermal conduction. In one form of the invention a flexible fibrous backing sheet such as paper is bonded to the base sheet to provide dimensional stability and prevent warping, shriveling, melting or other damage during microwave heating.

The '513 patent contains 23 claims. Several of the more pertinent claims are as follows:

> 1. A flexible sheet structure comprising a base sheet composed of microwave transparent flexible sheet material, a thin layer microwave coupling material as an island which becomes hot when exposed to microwave energy, said layer being selectively positioned on a portion of the base sheet to achieve heating of a product that is to be heated through conductive heating from the layer of microwave coupling material in the selected area

where the coupling layer is located and other portions of the base sheet remaining unheated when exposed to microwave energy.

2. The flexible sheet structure of claim 1 wherein the base sheet is a plastic resinous film and the microwave coupling layer is a semiconductive metallic film applied to one surface of the base sheet.

3. The flexible sheet structure of claim 1 wherein the unheated portions of the base sheet are adapted to be folded, tucked and wrapped around said product and upon exposure to microwave energy the sheet will be free from damage due to shrinking, shriveling, warping or melting whether loose and unsupported or part of a seal.

7. The flexible sheet structure of claim 1 wherein a layer of paper is bonded to both the top and bottom surface of said base sheet to provide dimensional stability and thereby assist in preserving the integrity, shape and dimensions of the base sheet.

> 8. A laminate suited for wrapping, packaging and shipping articles comprising a backing composed of a flexible sheet of dimensionally stable fibrous organic non-thermoplastic material transparent to microwave energy and a base sheet bonded thereto of dimensionally unstable plastic film and a layer of microwave coupling material which becomes hot in a microwave oven when exposed to microwave energy and said backing sheet preserving the integrity, shape and dimensions of the base sheet and the coupling layer.
>
> 14. The laminate of claim 8 wherein said backing sheet comprises a sheet of stiff paper and said laminate is folded by the application of pressure to the form of a self-supporting dish.

Even though the '513 application was substantially related to the '723 application, Golden Valley disguised this relationship. Mr. Harmon was aware that Examiner Weinstein was a primary examiner in the art unit that examined microwave packaging for cooking, unlike Examiner Bell who examined the '513 patent (as well as the later '765 patent), who was in the art unit that examined sheet

material laminates. Thus, rather than titling the '513 application with the name "Popcorn Package" (and notwithstanding that the goal of the invention was to satisfactorily pop microwave popcorn), Mr. Harmon and the inventors titled the '513 application "Flexible Packaging Sheets"[41] which led to its being assigned to Examiner Bell. Clearly, however, the '513 application, like the '723 application, involved the incorporation of a susceptor into a microwave package for cooking food, particularly popcorn. However, the claims, as originally filed in the '513 application, were framed such as to not claim a microwave cooking package, a popcorn package, or a microwave cooking article, but rather to claim a "flexible sheet structure" and a "laminate suited for wrapping, packaging and shipping articles." Neither the abstract, the title, nor the claims in the '513 application ever use the terms "food" or "cooking", although the "Summary of the Invention" does disclose that the invention is suitable for heating food. After the application was directed to Examiner Bell, and examined, the very next claim added to the application, Claim 15, describes, for the first time, the application of the invention to the packaging and cooking of food products[42].

Moreover, new terms or definitions for identical structures in the '723 application were incorporated into the

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[41] DX1, JX 42.

[42] DX261, D00028-D00030, D00044; Harmon T.T. 1/23/92 pp. 229-230, T.T. 1/24/92 pp. 41-45, 62-64, 83, T.T. 1/27/92 pp. 208-209, 218-221; Burnett T.T. 1/30/92 pp. 129, 182-183.

'513 application. For example, in the '723 application, the susceptor material was termed a flexible foldable inductive microwave pickup sheet comprising, in the preferred embodiment, a vacuum metallized polyester film; while in the '513 application, the susceptor was referred to as a base sheet with microwave coupling material which, in the preferred embodiment, comprised a vacuum metallized polyester film. Similar alterations were made in the name of the stabilizing paper, which was described as a "flexible sheet material" in the '723 application, but was called a "dimensionally stable, flexible material transparent to microwaves" in the '513 application[43].

Also, the '513 application specified that the "flexible sheet material" (stabilizing sheet) was preferably a cellulosic material, such as "paper, cardboard, paperboard or synthetic sheet." Golden Valley, and particularly Mr. Harmon, categorized all such cellulosic materials including paper, cardboard and paperboard as comprising a "flexible" sheet material. Claim 14 of the '513 patent itself described the flexible sheet material as a stiff self-supporting paper dish[44], suggesting that the material used need not be as flexible as plain paper, but may vary depending on the particular application of the invention.

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[43] DX263; DX261; Harmon T.T. 1/23/92 pp. 233-241, T.T. 1/24/92 pp. 4-6, T.T. 1/27/92 p. 206; Burnett T.T. 1/29/92 pp. 185-189, T.T. 1/30/92 p. 129.

[44] DX1, JX 42, Col. 11, ls. 3-6; Andreas T.T. 1/22/92 pp. 29-33; Harmon T.T. 1/24/92 pp. 47-49, T.T. 1/27/92 pp. 217-218; Turpin T.T. 1/31/92 pp. 159-160.

Further, with regard to the similarities between the '723 application and the '513 application, Figure 5 of the '513 patent shows essentially what Figure 1 of the abandoned '723 application shows: a popcorn bag[45]. Moreover, Claim 14 of the abandoned '723 application corresponds almost identically to the language of Claim 11 of the '513 patent in that both claims call for (a) a structure of a bag; (b) formed from flexible sheet material transparent to microwave energy; (c) a susceptor formed by a base sheet with a microwave inductive material thereon; (d) in which the susceptor becomes hot when exposed to microwave energy; (e) the susceptor being bonded to the paper sheet; and (f) the bonding of the susceptor to the paper sheet supporting or stabilizing the susceptor[46]. In sum, both applications deal with susceptors; both applications include a susceptor comprising a flexible and foldable inductive microwave pickup sheet; the susceptor in each application consists of metallized aluminum on polyester; the susceptor in each application is located in the center third of the bag, positioned under the food (popcorn and oil) to be heated[47]; both applications rely on bonding the susceptor to a paper backing; each application discloses a laminate formed by the susceptor and the backing paper; each laminate consists of

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[45] DX263; DX261; Burnett T.T. 1/29/92 pp. 172-174, 182-185.

[46] DX263, D045, D046; DX1, JX 42, Col. 10.

[47] DX263, D027, Fig. 5

a flexible sheet material to which the susceptor is bonded[48]; and both applications disclose that the susceptor material may be bonded between the plies of the bag or just to one ply of the bag[49].

Clearly, virtually every single element of what Golden Valley argues was the "far different" subject matter of the '513 patent was described and claimed (and rejected by Examiner Weinstein) during the prosecution of the '723 application. The disclosures in the '723 application, and the manner in which Examiner Weinstein addressed the prior art to those disclosures, were thus clearly material to Examiner Bell[50].

In spite of the striking similarities between the two applications, Golden Valley never advised Examiner Bell of the existence of the co-pending '723 application, the circumstances surrounding its rejection, the similarities of subject matter and identity of claimed subject matter, or of the identity of Primary Examiner Steven Weinstein who had examined this closely related application[51]. The Patent

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[48] DX263, D007, D008, ls. 19-21.

[49] DX263, D016, ls. 11-13; DX1, Col. 6, ls. 38-45; Harmon T.T. 1/24/92 pp. 118-121; Burnett T.T. 1/29/92 pp. 170-186, 194; Turpin T.T. 1/31/92 pp. 69-73.

[50] DX263; DX261; Harmon T.T. 1/23/92 pp. 233-241, T.T. 1/24/92 pp. 4-6, T.T. 1/27/92 p. 206; Burnett T.T. 1/29/92 pp. 176-179,T.T. 1/30/92 pp. 16-17, 91-98.

[51] Harmon T.T. 1/24/92 pp. 69-72, 102, 144-148, 158-159, 188; Burnett T.T. 1/29/92 pp. 170-186, 226-227; DX261, DX271.

Office expressly disclosed the basis for the rejection of the '723 application to attorney Harmon, before, during, and after Harmon's preparation, filing and prosecution of the '513 application[52]. Thus Harmon knew that the subject matter of the invention suffered from "obviousness" problems which should have been disclosed to Examiner Bell.

In the '513 application, as in the '723 application, Mr. Harmon initially pursued patent protection over susceptor-paper laminates utilizing a single sheet of paper bonded or laminated to only one side of the susceptor[53]. Each of the inventors signed the oath and declaration in the '513 application averring that they had in fact invented the subject matter of Claim 8, (claiming a susceptor-to-paper laminate) and the other claims dependent thereon, even though they knew that they had not originated the idea of bonding a single sheet of paper to a susceptor[54]. In fact, this concept was embodied in the early James River Qwik Crisp technology.

As noted, Examiner Bell, who examined the '513 application, and Examiner Weinstein, who examined the

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[52] DX263; DX261; DX271; Harmon T.T. 1/24/92 pp. 144-145, 158, 188; Burnett T.T. 1/29/92 pp. 170-186, T.T. 1/30/92 pp. 101-102.

[53] DX261, D00028-D00031, Claims 8-14; Andreas T.T. 1/22/92 pp. 33-36, 51; Harmon T.T. 1/23/92 pp. 207-209, T.T. 1/24/92 pp. 21-26, 52-53, 79-80, 107; Burnett T.T. 1/29/92 pp. 172-174, 189, T.T. 1/30/92 p. 106.

[54] Cox D.T. pp. 136-137; Andreas T.T. 1/21/92 pp. 188-189, T.T. 1/22/92 pp. 12-17, 34-35, 116-118.

'723 application, work in different art units of the Patent Office. Examiner Weinstein works in the unit that examines applications for microwave food packaging technology, and Examiner Bell works in the unit that examines applications for laminates[55]. Neither of the Examiners was aware that the other was examining the '723 application and the application for the '513 patent, respectively[56]. Based on the evidence described in detail earlier, the court finds that Golden Valley affirmatively sought to steer the '513 application away from Examiner Weinstein and his art unit.

Neither Mr. Harmon, Mr. Watkins, nor or anyone else associated with Golden Valley, disclosed the '723 application and its prosecution history to Examiner Bell during the prosecution of the '513 patent (June 3, 1985 through April 5, 1988)[57]. The prosecution history of the '723 application was withheld from production in the present litigation for nearly two years, on the basis that it responded to claims that were not asserted in the present action, such as Claims 8 through 14 of the '513 patent. In May of 1990, Golden Valley produced, pursuant to this court's order, a copy of the prosecution history covering the '723 application. This prosecution history revealed Golden Valley's failed attempt to obtain patent protection on the concept of

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55 Test. of R.F. Burnett.

56 Id.

57 DX261.

laminating a susceptor to at least one sheet of paper material to stabilize and support it.

IV. Nondisclosure of Prior Art in the '513 Application

During the prosecution of the '513 application Mr. Harmon did not inform Examiner Bell of the existence of Pillsbury's pizza package, Wyandot's commercial popcorn package, James River's Qwik Crisp technology, the Brandberg '045 patent, the Winters '427 patent, or the Borek '573 patent[58]. The Pillsbury pizza package, the Wyandot popcorn container, and the James River Qwik Crisp products would all have been important to a reasonable examiner in deciding whether to allow the '513 patent since they were successfully commercialized structures, including one for popcorn (using a single-sided paper-to-susceptor laminate). All of these structures were known to Golden Valley as a result of its review of the prior art[59]. Also, Golden Valley never disclosed to Examiner Bell that the inventors named therein did not invent the single-sided laminate or that Golden Valley had obtained such a laminate as a product from James River more than one year before the filing date of the '513 application, and had seen such a

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[58] DX261; Burnett T.T. 1/29/92 pp. 139-165, 270-271, T.T. 1/30/92 pp. 48, 53-54; see also, Pre-trial Order Stip. 8.

[59] DX555; Harmon T.T. 1/27/92 pp. 66-89; Burnett T.T. 1/29/92 pp. 127-128, 131-136, 155-162, 262-267, T.T. 1/30/92 pp. 48,51, 53, 102-106, 157-159.

laminate in the Pillsbury pizza tray and the Wyandot popcorn box. The inventors and attorney Harmon knew that Golden Valley had obtained and tested the laminate[60] but they nevertheless held the single-sided laminate out as a new invention, worthy of patent protection.

Prior to the issue date of the '513 application Mr. Harmon was aware of the existence of the Brandberg '045 reference (having prosecuted that application on behalf of Pillsbury employee Brandberg years earlier) and was familiar with the '045 reference from the repeated disclosure and reliance by Examiner Weinstein during prosecution of the '723 application. Before and/or during the prosecution of the '513 application, Mr. Harmon was likewise familiar with the Wyandot container, Pillsbury pizza laminate, James River Qwik Crisp product, the Bohrer '010 and '882 references, the Brastad '420 and '924 references, the Seiferth '005 reference, and the Borek '573 reference, which was likewise cited during the '723 prosecution history. Mr. Harmon was also independently aware of the Winters '427 reference[61]. The evidence presented to this court clearly indicates that Mr. Harmon was aware of the prior art, its significance and its materiality when he began the prosecution of the '513 patent. Mr. Harmon waited nearly 15

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[60] Cox T.T. 1/28/92 pp. 81-84, 97-99, 101, 122, 123, 152; DX-263, D015; DX-18; Harmon T.T. 1/24/92 pp. 55-56, 69-75, 102, 144-148, 158-160; Burnett T.T. 1/29/92 pp. 139-165, 270-271, T.T. 1/30/92 pp. 48, 53-54.

[61] DX263, D035, D036, D040-D043, D052-D058; DX273, Bates 313555.

months after filing the initial '513 application (June 3, 1985) to disclose any of the relevant, material prior art of which he was aware--notwithstanding the fact that during 1984 and 1985 he had been repeatedly apprised of the most relevant prior art with respect to a susceptor-to-paper laminate by Examiner Weinstein in the '723 application, by the '513 inventors, and through the James River-Golden Valley litigation[62].

Claims 2, 4-10, and 12-14 were allowed by Examiner Bell on June 3, 1986, whereas Claims 1, 3, and 11 were rejected[63]. On September 11, 1986, Mr. Harmon filed an amendment and a Prior Art Notice with respect to the '513 patent. The amendment to the '513 application added, for the first time, claims[64] which described the paper-susceptor-paper laminate[65]. For example, Claim 15 reads as follows:

> A flexible laminate including at least three layers suited for wrapping, packaging and shipping food articles that are

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[62] DX261, D00044-D00051; Harmon T.T. 1/24/92 pp. 65-69; Burnett T.T. 1/29/92 pp. 139-165, 270, 271, T.T. 1/30/92 pp. 48, 53-54; Chisum T.T. 2/3/92 pp. 129-130, 131-132.

[63] DX261, D00041-D00051; Harmon T.T. 1/24/92 pp. 56-57, 65-69; Burnett T.T. 1/29/92 pp. 172-174, T.T. 1/30/92 p. 106.

[64] E.g., Claim 15.

[65] DX261, D00044-D00047.

to be heated in a microwave oven comprising a base sheet composed of microwave transparent flexible sheet material coated on at least one surface thereof with a layer of microwave interactive coupling material which becomes hot when exposed to microwave energy and being susceptible to melting, shrinking, warping and/or shriveling when exposed to microwave energy, said base sheet being positioned on a selected portion of the laminate to achieve heating of said food product through conduction of heat from the layer of microwave interactive coupling material to the food product in a selected area where the coupling material is located while other portions of the laminate remain unheated when exposed to microwave energy, and two layers of dimensionally stable flexible backing sheet material, one such backing sheet being bonded to each side of the base sheet to form a sandwich structure in which the base sheet is encapsulated and dimensionally stabilized by the enclosing flexible backing sheets on each side thereof, said backing sheets being composed of non-thermoplastic

> fibers that assist in preserving the integrity, dimensions and shape of the base sheet when the base sheet is exposed to microwave energy and heat being transferred from the base sheet through one of the dimensionally stable fibrous backing sheets to the food product by thermal conduction without disturbing the fibrous structure thereof.

Nonetheless, Mr. Harmon accepted the allowance of Claims 2, 4-10 and 12-14 which cover the susceptor-to-paper laminate[66]. In this Prior Art Notice Mr. Harmon listed 16 patents including the Bohrer '010 patent, but did not cite the commercial Wyandot container, the commercial Pillsbury pizza tray, the Qwik Crisp technology, the Japanese published application corresponding to the '723 application, or the Brandberg '045 and Borek '573 patents which were cited in the '723 application examination[67]. Although Mr. Harmon identified the Bohrer '010 patent by number and inventor's name, he did not disclose that the Bohrer '010 patent contained a "buried" reference to a gussetted, flexible paper popcorn bag having a susceptor bonded to its inner

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[66] DX261, D00047, ls. 11-12; Harmon T.T. 1/24/92 pp. 62-66; Burnett T.T. 1/29/92 pp. 185-189, T.T. 1/30/92 p. 129.

[67] DX261, D00048-D00050; Harmon T.T. 1/24/92 pp. 66-86; Burnett T.T. 1/29/92 pp. 139-165, 270-271, T.T. 1/30/92 pp. 48, 53-54.

side. In fact, in the '513 patent, Mr. Harmon had obtained patent protection over a bag such as the one described in the Bohrer '010 patent[68]. Mr. Harmon further represented that the Brastad '924 and '420 references both failed to disclose the use of stabilizing layers, notwithstanding his own knowledge from having read the Brastad references that they taught the option of "supporting" the flexible susceptor material by "more rigid dielectric material such as paperboard and the like"[69], and despite his being so informed by Examiner Weinstein during the prosecution of the '723 application. At trial Mr. Harmon admitted to making those representations despite his knowledge of the disclosures of the Brastad references[70].

In the specification of the invention disclosed in the '513 patent, Mr. Harmon disclosed tests performed by the Golden Valley inventors using the Brastad invention to heat chicken patties and fish sticks. Mr. Harmon admitted at trial that the tests were performed using the Brastad susceptor material that did not have a paper or paperboard backing, even though Brastad had recommended that "supportive" paper backings or paperboard backings be utilized. The use

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[68] DX301, JX 37, Fig. 6, Col. 8, ls. 37-42; Andreas T.T. 1/22/92 pp. 68-71; Harmon T.T. 1/24/92 pp. 67-69, 77-79, T.T. 1/27/92 pp. 11-15, 190-203, 226-227; Burnett T.T. 1/29/92 pp. 128-131, 135, 153-155, T.T. 1/30/92 pp. 48, 53-54.

[69] DX267, JX 23; DX268, JX 27.

[70] DX261, D00049; Andreas T.T. 1/22/92 pp. 20-24; Harmon T.T. 1/24/92 pp. 80-82.

of a supportive backing would have yielded better test results as there would have been less shriveling and disintegration of the heating material and there would have been more thorough heating and browning of the food[71]. Moreover, in 1985 Golden Valley conducted tests utilizing the Brastad susceptor films with a supportive backing and the Brastad susceptor worked satisfactorily with only minor problems. However Golden Valley did not disclose these test results to Examiner Bell[72].

After conducting his own search at the United States Patent Office, Examiner Bell only cited, as prior art, a radar-reflecting survivor vest fabric disclosed in the Ebneth '588 patent. Examiner Bell had no knowledge of any other prior art when he allowed the majority of the '513 claims including Claim 8, which covered a susceptor-to-paper laminate, a structure that was repeatedly disclosed in the prior art.

When Mr. Harmon attempted to distinguish the Canadian version of the Seiferth '005 patent[73] by claiming that the Seiferth patent failed to suggest the attachment of a sheet of paper on both sides of the susceptor[74], he knew that the claims that Examiner Bell had already allowed (Claim 8,

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71 DX267, JX 23, Col. 6, ls. 39-42; DX268, JX 27, Col. 5, ls. 10-13; Cox D.T. pp. 375-376.

72 Cox D.T. pp. 375-376; Andreas T.T. 1/22/92 pp. 18-28.

73 Canadian Patent No. 1,153,069, JX 45.

74 DX261, D00049, ¶3.

etc.), covered a susceptor-to-paper laminate. Nevertheless, Mr. Harmon did not admit that he had received allowance of those claims, and did not discredit those claims, as he discredited identical claims in the Seiferth '005 patent, in spite of the existence of the Pillsbury pizza product, the Wyandot commercial popcorn package, the Qwik Crisp technology, the two Brastad patents, and the Bohrer '010 patent[75], all of which utilized a single-sided susceptor.

On April 17, 1987, Golden Valley notified Examiner Bell of the Seiferth '005 patent's issuance. The '005 patent issued on February 3, 1987 and is assigned to James River. This patent is titled "Food Receptacle for Microwave Cooking." Claim 1 of the '005 patent is as follows:

> A laminate for use in a disposable container adapted to heat the surface of a quantity of food when exposed to microwave energy, said laminate comprising
>
> (a) a continuous microwave interactive layer of elemental metal having a thickness which is sufficiently small to cause said microwave interactive layer, when subjected to microwave

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[75] DX261, D00048-D00051; Harmon T.T. 1/24/92 pp. 66-86.

energy, to heat up to a temperature which is sufficient to heat the surface of food in heat transfer relationship therewith,

(b) protective means for said microwave interactive layer, said protective means including a smooth surfaced plastic film having sufficient stability at high temperature that it will not degrade when the laminate is subjected to sufficient microwave energy to heat the surface of the quantity of food, and

(c) support means for providing structural support for said interactive layer and said plastic film, said support means being formed of paper stock material having sufficient structural stability at the high temperature necessary for heating the surface of the quantity of food to maintain its physical shape;

wherein said laminate is formed by the process including the successive steps of vacuum depositing said microwave interactive layer onto a smooth surface of said plastic film followed by the step of bonding directly said plastic film upon which said microwave interactive

> layer has been vacuum deposited to one side of said paper stock material in a manner to cause said plastic film and said microwave interactive layer to be held in bonded relationship with said support means to cause the surface of a quantity of food, when in heat transfer relationship therewith, to be heated when the laminate is subjected to microwave energy.

Examiner Bell disallowed all of the Claims, 1-22 and 27, of the '513 patent application in light of the Seiferth patent. When Mr. Harmon notified Examiner Bell of the Seiferth '005 patent, but before the Examiner rejected the claims, he informed Examiner Bell of the existence of certain test results that he believed would overcome the Seiferth '005 reference[76]. Attorney Harmon claimed that the Seiferth '005 structure was "unsuitable for important applications," that all of the samples had failed the tests in that the samples always exhibited shriveling, disruption, and charring of the microwave interactive material.

Golden Valley represented to Examiner Bell that Golden Valley had performed tests, which it was prepared to submit in affidavit form (if Examiner Bell so requested), to prove that its invention was superior to Seiferth's inven-

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[76] DX261, D00089; Harmon T.T. 1/24/92 pp. 84-96; Burnett T.T. 1/29/92 pp. 190-196, 218-225, 228-248, T.T. 1/30/92 pp. 25-27, 160-162.

tion, and that the invention Seiferth described was prone to "burning and perforation," "disintegration" and "contamination of the food." In preparing the affidavit, Mr. Harmon intended to prove that a susceptor bonded on each side to a sheet of paper was superior to a simple susceptor-to-paper laminate, as disclosed in the Seiferth '005 patent. Incongruously, Harmon also asked for issuance of the '513 claims that covered only susceptor-to-paper laminates (i.e, claims 8-14)[77].

V. The Comparative Testing Re: The '513 Application

Examiner Bell, at Mr. Harmon's request, invited Harmon to submit his test results together with an associated affidavit to show the results of the Golden Valley "invention" compared to the results of the Seiferth invention[78]. Golden Valley has acknowledged the importance of these comparative tests and the resulting affidavit as being crucial to the issuance of the '513 patent[79]. As a result of citing the Seiferth '005 reference, Golden Valley would not have

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[77] DX16; DX17; DX261, D00085-D00126; Harmon T.T. 1/24/92 pp. 99-109.

[78] DX261, D00049, ¶3, D00087-D00092.

[79] DX261, D00094-D00126.

received the '513 patent in the absence of the affidavit and test materials[80].

In conducting the comparative tests, Golden Valley opted to compare samples of their own machine-manufactured product, directly off their production line, against hand-made samples of what was termed the Prior Art Test Material[81]. Mr. Andreas admitted that Golden Valley conducted an earlier test (referred to as the "first test") in March of 1987, apparently comparing hand-bonded single-sided to hand-bonded double-sided susceptors[82]. However, no data was retained from this "first test."[83] No explanation was provided for the lack of retention of such "first test" data, and the inference can therefore be made that such results did not satisfactorily support Golden Valley's contentions at the time.

Golden Valley has acknowledged the importance of the following factors in the construction of a susceptor bonded to a stabilizing sheet of paper, which factors are crucial to

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[80] Andreas T.T. 1/22/92 p. 53-55, 59-64, 118, 219; Harmon T.T. 1/24/92 pp. 98-101, 106-109, 122-123, 142-143, 144-145; Burnett T.T. 1/29/92 pp. 190-192, 194-197, 225, 228-248, T.T. 1/30/92 pp. 160-163.

[81] Andreas T.T. 1/22/92 pp. 59-66, 78-90; Harmon T.T. 1/24/92 pp. 137-139; Brandberg D.T. p. 45.

[82] Andreas T.T. 1/22/92 pp. 89-93, T.T. 1/23/92 pp. 155-157.

[83] Andreas T.T. 1/22/92 pp. 90-92.

the capability of the susceptor to withstand scorching, shriveling, and burning:

A. The particular adhesive that is utilized;

B. The amount of adhesive used;

C. The kind of paper to which the susceptor is bonded (e.g., kraft paper as opposed to greaseproof paper);

D. The manner in which the adhesive bond between the susceptor and paper is cured or dried; and

E. The pressure to which the susceptor to paper laminate is exposed upon lamination.[84]

Nevertheless, the comparative tests that Golden Valley conducted compared "noncomparable" laminates because the hand-made Prior Art Test Materials were made with an adhesive two and one-half times more likely to fail, utilized little or no laminating pressure, were not dried in an oven, and utilized different papers for bonding as well as different amounts of adhesive[85]. Reference to PX-362, an actual sample of the hand-made prior art test bag, shows the susceptor poorly attached to the paper ply of the bag, with no bonding around the periphery of the susceptor and little bonding elsewhere as evidenced by the lack of fiber-tear[86].

In reporting the test results, Mr. Harmon failed to disclose to Examiner Bell the following facts: (1) that the

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[84] Andreas T.T. 1/22/92 pp. 38-54, 79-108; Brandberg D.T. pp. 124-125, 140-141, 196-198, 220-223.

[85] Cox D.T. p. 437; Brandberg D.T. pp. 44-45, 52-64, 109-113; Andreas T.T. 1/22/92 pp. 38-54, 79-108.

[86] Andreas T.T. 1/23/92 pp. 159-162.

amounts of glue between the two categories of test samples were different; (2) that the actual glue utilized on the Prior Art Test Material was a glue that was two and a half times more likely to fail to hold the susceptor to the paper backing; (3) that the Prior Art Test Material involved little or no pressure being applied during the preparation of the laminate that would affect the bond strength between the paper and the susceptor; (4) that the Prior Art Test Material had not been subjected to elevated drying temperatures, but was merely hung up to dry out at ambient temperature, without exposure to an oven; (5) that, in the affidavit, the drawing of the Invention Test Material was erroneous in that the invention test material had its susceptor attached directly to kraft material (which provides a better bond to a susceptor)[87]; (6) that the Invention Test Material utilized a different adhesive than that specified in the affidavit to attach the susceptor to the greaseproof paper--an adhesive that was known to be much more effective in maintaining the susceptor-to-paper bond[88]; and (7) that the adhesive used in the Prior Art Test Material (Duracet 12) was a "thermosetting" adhesive[89].

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[87] Pre-trial Order Stip. 12.

[88] DX-261; DX-17; Brandberg T.T. 1/28/92 pp. 267-272, 277, 289, T.T. 1/29/92 pp. 13-18, 73-75; Cox T.T. 1/28/92 pp. 217, 218; Andreas T.T. 1/22/92 pp. 38-54, 79-108; Harmon T.T. 1/24/92 pp. 116-119; Burnett T.T. 1/29/92 pp. 192-203, 218-225, T.T. 1/30/92 pp. 25-27.

[89] Andreas T.T. 1/22/92 pp. 88-89.

Further, it was not disclosed to Examiner Bell in the '513
application that the popcorn bag disclosed in the '723 application, in which the susceptor was bonded to only one ply of paper had been tested by Golden Valley and proclaimed to have achieved unexpected beneficial results including: (1) concentrated heating without the use of a rigid container which is unsuitable as a shipping package; (2) rapid and efficient induction of heat to a food product from a much hotter inductive layer without crinkling or shriveling of the pickup material which might move it away from the adjacent food product; (3) little or no scorching of the inductive layer; and (4) an increase of popcorn volume from 135 to 160 percent greater than the same control bag with no inductive pickup sheet[90]. The samples tested for the '723 application included susceptor films that had been stripped off the paper backing and then bonded directly to the inside of a nonsusceptor bag, as well as susceptor films that were not removed from the paper backing and were likewise bonded to the inside of a nonsusceptor bag[91]. Mr. Turpin

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[90] DX-263, D048-D050 at D049; DX-39; DX-413; Andreas T.T. 1/21/92 pp. 167, 178-186; Harmon T.T. 1/23/92 pp. 147, 152, 218, T.T. 1/24/92 pp. 92-96, 102, 106, 119, 121, 144-146; Burnett T.T. 1/29/92 pp. 170-186, 194-197, 223-227, T.T. 1/30/92 pp. 14-25.

[91] DX-39; DX-413; DX-632; DX-633; DX-634; Andreas T.T. 1/21/92 p. 178-186, T.T. 1/23/92 pp. 43-45, 67, 68, 150-155; Harmon T.T. 1/23/92 pp. 210-215, 218, T.T. 1/24/92 pp. 92-96; DX-263 D044-D050.

and Mr. Burnett both acknowledged that these tests were relevant and material to the '513 application[92].

Mr. Harmon failed to disclose the fact that the reports of the '513 tests directly contradicted the tests and representations made in the '723 application regarding the ability of a susceptor-to-paper laminate to withstand scorching, shriveling, and burning[93]. In particular, Golden Valley concealed in its affidavit the fact that it had made an absolutely contradictory representation in its '723 application, namely that it had performed "extensive testing" which proved that the susceptor obtained from James River which was directly in contact with food did not "shrivel," "scorch" or "disintegrate." It was materially misleading for Golden Valley's '513 affidavit not to have disclosed this inconsistent representation, and the inconsistent testing upon which the representation was based. Moreover, this contradiction underscores the materiality of the '723 application, the disclosure of which would have revealed this contradiction[94].

Further, in direct contradiction to the representations of the "Affidavit under 37 U.S.C. 1.132" dated August 31,

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[92] Burnett T.T. 1/29/92 pp. 170-186, 194-197, 223-227; Turpin T.T. 1/31/92 pp. 89-92.

[93] DX-263, D012 et seq.

[94] DX-263; DX-17; DX-261; Burnett T.T. 1/29/92 pp. 170-186, 194-197, 223-227; Turpin T.T. 1/31/92 pp. 166-167.

1987[95], that the subject matter of the James River patents was "unsuitable for important applications"[96] and "were unsuitable for commercial use"[97], Mr. Harmon had received and reviewed information to the contrary in the Seiferth '005 file wrapper by March 31, 1987[98]. Included in the Seiferth '005 prosecution history were the three affidavits of Saunders, Brown and Middleton[99], which revealed the commercial success of a number of packaging products containing the subject matter of certain James River patents, including the '005 patent of Seiferth. Mr. Harmon could not explain why he would not have read such documents in the Seiferth '005 prosecution history which touched on some of the same issues raised in the '513 prosecution[100]. Such cultivated ignorance is not only not credible, it tends to show knowing and deliberate deception.

Without disclosing that the prior art commercial Wyandot package (which implemented the Bohrer '010 and '882 patents) exhibited no scorching, shriveling or burning, and had been commercially successful for several years, Mr. Harmon falsely represented that the test conducted with

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95 DX-17.

96 DX-261, D00089

97 DX-261, D00095, D00102

98 DX-555; DX-273; Harmon T.T. 1/27/92 pp. 54-57.

99 DX-555 (a), (b) and (c)

100 Harmon T.T. 1/27/92 pp. 67-83.

regard to the '005 Seif-erth reference also showed commercially nonacceptable traits (burning, scorching, etc.) such as was present in the inventions disclosed in the Bohrer '010 and '882 patents[101] and that the test results were thus also applicable to the Bohrer '010 and '882 prior art[102]. The actual test panels of the '765 application testing have confirmed that the test results of the '513 affidavit were false[103].

Consequently, the court finds that the affidavit that Golden Valley submitted to the Patent Office, which was signed by David Cox, Lawrence Brandberg, and David Andreas was materially false and misleading[104]. The court further finds that Mr. Harmon devised the tests and the test parameters, designated the constructions, and wrote the affidavit which was submitted to the Affiants for their

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101 DX-261, D00095

102 Cox T.T. 1/28/92 pp. 83-85, 101, 155, 156, 159, 160; Andreas T.T. 1/22/92 pp. 183-187; Harmon T.T. 1/24/92 pp. 102-103, 106, 119-121; Burnett T.T. 1/29/92 pp. 170-186, 194-197, 223-227; Howard T.T. 2/3/92 p. 204; Brown T.T. 2/3/92 pp. 234-238; Watkins T.T. 2/3/92 pp. 308-310.

103 PX-379; PX-380; Harmon T.T. 1/24/92 pp. 130-138, 168-184; Turpin T.T. 1/31/92 pp. 43-47, 200-211; Burnett T.T. 1/29/92 pp. 201-203, T.T. 1/30/92 pp. 137-141.

104 Burnett T.T. 1/29/92 pp. 201-203, T.T. 1/30/92 pp. 137-141.

execution, which Affiants just read and signed[105]. Neither Cox, nor Brandberg, nor Andreas checked the accuracy of the submitted affidavit test information[106]. Further, the '513 comparative testing did not have any documented protocol nor any calibration techniques[107]. The testing was done "in-house," while Golden Valley had previously used an independent laboratory facility, Medallion Laboratories in Minneapolis, Minnesota, to conduct popping studies[108].

With knowledge that the comparative tests of the '513 application only attempted to distinguish the three-ply structure from the two-ply structure, Mr. Harmon nonetheless petitioned for and obtained allowance of all pending Claims 1-22 and 27 (as filed)--while Claims 8-14 still only covered a single paper sheet-to-susceptor (two ply) laminate. Claim 8, for example, covered what Harmon had described in the comparative tests as the prior art construction. Based on these representations, Mr. Harmon was able to address, via testing, only the three-ply structures, yet obtain claim coverage over the two-ply structures such as those represent-

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105 Brandberg D.T. pp. 28, 87-90, 95-96, 98-99, 209, 211; Andreas T.T. 1/22/92 pp. 95-119.

106 Brandberg D.T,. pp. 119, 187, 208-209; Andreas T.T. 1/22/92 pp. 95-119.

107 Brandberg D.T. p. 184; Cox D.T. pp. 450, 452-459, 477-478.

108 DX-30; Andreas T.T. 1/22/92 pp. 73-77.

ed by the prior art which he had purportedly distinguished from the three-ply invention[109].

While Golden Valley first marketed and publicly sold its popcorn products in October, 1984, most foreign patent applications were filed in various foreign countries with a convention priority date of June 3, 1985, the filing date of the '513 application[110]. It is unrebutted that the specification and claims of the '723 application provided support for filing the '513 application as a continuing application to the '723 application. As to such subject matter of the '513 application for which there was support in the '723 application, Golden Valley's '513 application would have had the benefit of the earlier May 21, 1984 filing date of the '723 application. Had Golden Valley done so, it could have saved the validity of its foreign counterpart patents rendered invalid in "absolute novelty" countries such as Europe and Japan by the placing on sale of the ACT II popcorn bag in the United States in October of 1984. Accordingly, Golden Valley's failure to claim priority for the '513 application based on the '723 application so as to avoid having the '513

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[109] DX-261, D00095, ls. 24, 25; Andreas T.T. 1/22/92 p. 118; Harmon T.T. 1/24/92 pp. 106-109, 122-123, 144-145, 154-156; Burnett T.T. 1/29/92 pp. 190-192, 225-248, T.T. 1/30/92 pp. 160-162.

[110] DX-272; Harmon T.T. 1/24/92 p. 190, T.T. 1/27/92 pp. 187-188; Chisum T.T. 2/3/92 pp. 109-118, 119-123; Burnett T.T. 1/29/92 pp. 129-130, 177-178, 188, 251.

application examined by Examiner Weinstein evidences Golden Valley's intent to commit inequitable conduct[111].

Mr. Charles Turpin, Golden Valley's chief packaging engineer and Director of Packaging Development, who testified that he was appearing as a representative of Golden Valley at trial[112], acknowledged that the testing of the James River susceptors performed by Golden Valley in connection with the '723 application was relevant with respect to the '513 affidavit[113].

Plaintiff addressed these conflicting test results through Mr. Turpin. Mr. Turpin's conclusions are reported in 2 charts -- PX 392 (concerning the '513 testing) and PX 395 (concerning the '723 testing). However, these two charts ignore Mr. Andreas' and Mr. Harmon's testimony that the successfully tested '723 single-sided susceptor included susceptor material removed from the backing material supplied by James River[114]. Mr. Turpin's theory is that the '723 application, at PX 338 p. 40 (corresponding to DX

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111 Harmon T.T. 1/23/92 pp. 233-241, T.T. 1/24/92 pp. 4-6, T.T. 1/27/92 p. 206; Chisum T.T. 2/3/92 pp. 109-118, 119-123; Burnett T.T. 1/29/92 pp. 129-130, 176-179, 188, 248-251, T.T. 1/30/92 16-17, 91-98.

112 Turpin T.T. 1/30/92 p. 214.

113 Turpin T.T. 1/31/92 p. 90.

114 Andreas T.T. 1-21-92 pp. 167, 178-186, T.T. 1/23/92 pp. 43-45, 67-87, 147, 150-155; Harmon T.T. 1/23/92 pp. 210-215, 218, T.T. 1/24/92 pp. 92-96, 119-121; Burnett T.T. 1/29/92 pp. 170-186, 194-197, 223-227.

263 p. D48) when it refers to "flexible inductor sheets" in the first full paragraph, is referring to metallized polyester film backed to 60 pound paper, placed loose in the bag. Mr. Turpin then reasons that in the next paragraph of (D48), when this "sheet" is "bonded to a sheet of paper for dimensional support to prevent shrivelling and scorching", that the '723 application is describing bonding the 60 pound paper to a bag substrate of 55 pounds (25 pound greaseproof and 30 pound kraft laminated together), for a total substrate backing of 115 pounds. Mr. Turpin then reasons that this 115 pounds is heavy paper, approaching paperboard weight, which begins at approximately 140 pounds. He concludes that this is a different weight of backing than the 55 pound substrate used in the '513 testing of the "prior art" sample.

Mr. Turpin's premise is not supported by the record. Mr. Turpin has based his conclusions upon his reading of the '723 application, as to which he admittedly has no first-hand knowledge[115]. "Sheets" and "sheet material" are defined in DX 39 (the testing report that underlies the '723 application) at p. 3 to be "heater material removed from the paper backing as supplied by James River Corporation." Hence, the word "sheet" at DX 263 p. D47-48 refers quite clearly to the metallized polyester film without the 60 pound paper backing. When, at the bottom of p. D48, this "sheet" is "bonded to a sheet of paper for dimensional support to prevent shrivelling and scorching", the application is describing bonding the metallized polyester film to a piece

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[115] Turpin T.T. 1/30/92 pp. 225-226, T.T. 1/31/92 p. 161.

of paper, the weight of which is not specified, but which Mr. Turpin acknowledges would be the Golden Valley bag in use at the time, namely 55 pounds (25 pound greaseproof plus 30 pound kraft). This is the structure which on the next page of the application, D49, is represented to have "little or no scorching of the inductive layer" and to have no "crinkling or shrivelling of the pickup material." This structure corresponds precisely to the "prior art" structure tested in the '513 application, and which was represented to Examiner Bell to have diametrically contradictory results, namely to "shrivel, disrupt, and char" in all tests performed. Hence, the premise underlying Mr. Turpin's conclusions, that the substrate weight in the two applications differed, is incorrect.

Mr. Turpin's premise squarely contradicts the representation set forth in Golden Valley's own Trial Memorandum shortly before trial. In that Memorandum at p. 28, Golden Valley stated that: "In the '723 application, Golden Valley reported test results showing that an exposed metallized film bonded to the inside of its flexible bag gave improved popping performance over a control bag having no susceptor....It was represented generally in the application that the paper backing of the bag stabilized the film compared to no backing at all..." That description by Golden Valley is consistent with the Court's interpretation of the language of the '723 application set forth in the paragraph above, and inconsistent with Mr. Turpin's new interpretation.

But even if Mr. Turpin's premise were correct and the language on DX 263 p. D49 as to "no shrivelling or crinkling of the pickup material" referred to backing the film to 115 pound paper substrates, that would not alter the conclusion that the '723 testing of the single-bonded James River susceptor, and the representations made about that testing to Examiner Weinstein, were material and should have been disclosed to Examiner Bell. The '513 affidavit made representations about the Seiferth '005 Figure 2 patent structure, the Bohrer '010 susceptor structure, and the Bohrer '882 susceptor structure. Golden Valley represented to the Patent Office in April and August, 1987 that these patent structures always failed and had no suitable commercial use.[116] Seiferth '005 Figure 2 discloses a susceptor bonded to many kinds of papers as well as paperboard.[117] Both of the Bohrer patents disclose bonding the susceptor to paper or paperboard.[118] In making representations to the Patent Office about its testing of the "structures" of the Seiferth and Bohrer patents in April and August, 1987, Golden Valley was obligated to disclose any and all prior testing and prior representations by Golden Valley on such single-bonded James River susceptors, regardless of whether that testing was upon a susceptor backed to a 60 pound paper substrate, or upon a 115 pound heavy-paper substrate,

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116 DX 261 pp. D89, D95, and D97.

117 JX 39 col. 2 lines 42 through col. 3 line 2.

118 JX 37 and JX 40.

or even upon a heavier paperboard substrate. The Seiferth and Bohrer patent structures covered all such substrates.

The '723 application admittedly referenced the testing of, and contained representations about, single-bonded James River susceptors. Those susceptors were encompassed by the Seiferth and Bohrer patents. Those representations contradicted the representations made by Golden Valley to the Patent Office in April and August, 1987. It was material to a reasonable Patent Examiner to know this. Mr. Turpin's answers to the court's questions so acknowledged[119].

Regardless of plaintiff's explanations, the fact remains that the '765 test results were significantly different from the '513 results[120]. Mr. Turpin's testimony was rebutted by Mr. Brandberg's deposition testimony. Mr. Brandberg participated in both the '513 and '765 tests and was the only person who constructed the bags in the '765 tests. The results of the '765 tests, notwithstanding Mr. Turpin's testimony, simply show that the exposed susceptor is as good as, if not, on occasion, better than, the buried susceptor. Mr. Brandberg's deposition testimony clearly showed that the susceptor-to-paper bond in the '765 tests was machine laminated[121]. Mr. Turpin further admitted on cross examination, that at least one-third of the "invention"

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119 Turpin T.T. 1/31/92 pp. 89-90.

120 Harmon T.T. 1/24/92 p. 183; Burnett T.T. 1/29/92 pp. 201-203, T.T. 1/30/92 pp. 137-141; Turpin T.T. 1/31/92 pp. 43-47, 200-211; PX 380; PX 379.

121 Brandberg T.T. 1/29/92 pp. 39-41.

test bags in the '765 tests were actual production bags that had a machine lamination of susceptor-to-paper[122].

VI. Failure to Disclose the
Golden Valley/James River Litigation

On June 17, 1987, Golden Valley filed a Declaratory Judgment action against James River Corporation, Civil Action No. 3-87-420, in the United States District Court for the District of Minnesota. The complaint in that action requested a declaration of invalidity of James River's Bohrer '010 patent, Bohrer '882 patent and eventually the Seiferth '005 patent, on the grounds inter alia, of inequitable conduct. James River had earlier threatened to sue Golden Valley, claiming that Golden Valley was infringing James River's patents. James Harmon was one of Golden Valley's attorneys of record in that case and Golden Valley wanted the issuance of the '513 patent as soon as possible, to use as a bargaining tool[123].

James River's Bohrer '010 patent titled "Packaging Container for Microwave Popcorn Popping and Method for

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[122] Turpin T.T. 1/31/92 pp. 207-211.

[123] DX-415; DX-420; DX-469; DX-470; Andreas T.T. 1/22/92 pp.
144-164; Harmon T.T. 1/24/92 pp. 67, 68, 72-77, 78, 84-90, 147, 148, 158, 200-201, T.T. 1/27/92 pp. 5, 10-15, 32-34, 35-39, 40-50, 193-203; Burnett, T.T. 1/29/92 pp. 203-205, T.T. 1/30/92 pp.
6, 11-13; Chisum T.T. 2/3/92 pp. 134-136.

Using", issued on November 12, 1985. The abstract of this patent described the invention as follows:

> A container (2) for heating popcorn or other types of particulate food items in a microwave oven formed from a single blank having a bottom panel (4) coated with a microwave interactive material (26) adding heat to particulate food items such as popcorn kernels and configured so that each particulate food item placed into the container (2) for heating is spaced, on average, no more than the average diameter of one such food item away from the microwave interactive layer. The container is formed for shipping in a triangular wedge shape and for expansion into a trapezoidal box shape for use within a microwave oven for heating of the particulate food items.

Further, in describing the "best mode" of the invention, the patent states that:

> In another embodiment, the container could be either a standard flat bottom paper bag in which the microwave lossy element is placed in the bottom of

> the bag or a gussetted pouch style bag such as illustrated in FIG. 6 as bag 42 having the susceptor 44 spot-glued to a side 46.

Bohrer '010 Patent, Col 8, Lines 37-42.

Attorney Harmon discussed this patent with Messrs. Watkins and Andreas in February, 1986 and with Messrs. Watkins, Andreas and Cox on June 26, 1986 in connection with popping tests responding to James River's charge of infringement[124]. In fact, Golden Valley's own internal attorney opinion reports, in March and April of 1986[125] (prior to submission of Mr. Harmon's Prior Art Notice of September, 1986), and also in June of 1987, disclose Golden Valley's awareness of the structure and materiality of the prior art which was misrepresented to the Patent Office[126].

The Amendment to the '513 application, dated September 8, 1986, discussed several of the listed references. However, the amendment did not discuss the Bohrer '010 patent or the fact that Golden Valley's susceptor popcorn bag had been charged with infringing that patent, which had been the subject of two meetings between attorney Harmon and the inventors. Clearly the knowledge that the Golden

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[124] DX-470; DX-415; DX-273; JX 37; DX-306, p. 12; Harmon T.T. 1/24/92 pp. 67-69, 73, 78, 87-89, T.T. 1/27/92 pp. 12-57; Burnett T.T. 1/29/92 pp. 203-205, T.T. 1/30/92 pp. 6, 11-13.

[125] DX-261, D00048-D00051.

[126] DX-420.

Valley popcorn bag, which was the subject matter of the '513 application, had been charged with infringing the Bohrer '010 patent would have been important to a reasonable examiner in deciding whether to allow the '513 application to issue as a patent. In fact, Claims 2, 4-10 and 12-14 of the '513 application had all been allowed by Examiner Bell prior to the 16 citations filed in the September 8, 1986 amendment, and no mention of the importance of those citations to the previously allowed claims was made by attorney Harmon, even though Golden Valley's susceptor popcorn bag was being charged with infringing one of the "undiscussed" patents cited (the Bohrer '010 patent)[127].

Notwithstanding the fact that accusations of infringement had first surfaced in 1986, nearly two years before the issuance of the '513 application, with formal litigation initiated a full year before issuance of the '513 application, Mr. Harmon never apprised Examiner Bell of the existence of that litigation[128]. He also failed to tell Examiner Bell that the popcorn bag claimed by James River in its newly issued Bohrer '882 patent was the same bag claimed by the applicants in the '513 application[129]. The Bohrer '882 patent issued on July 7, 1987.

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[127] DX-261; Burnett T.T. 1/29/92 pp. 203-205, T.T. 1/30/92 pp. 6, 11-13; Chisum T.T. 2/3/92 pp. 134-136.

[128] DX-261; DX-271.

[129] JX 40; Harmon T.T. 1/24/92 84-85, 158, T.T. 1/27/92 pp. 33-34; Burnett T.T. 1/29/92 pp. 203-205, T.T. 1/30/92 pp. 6, 11-13.

Inasmuch as the James River-Golden Valley litigation involved the Bohrer, et al. '010 and '882 patents (being asserted by James River) as well as the Seiferth '005 patent (likewise being asserted by James River), the nature of the accusations, revelations and disclosures of who created which invention and when were material and should have been disclosed. A reference to the James River litigation would have revealed James River's contributions to the technology, the existence of the Wyandot container, Pillsbury's pizza laminate, James River's Qwik Crisp heater pad products and other commercially available products withheld by Mr. Harmon[130]. It also would have disclosed Golden Valley's contradictory interpretations of the prior art and its materiality[131]. Mr. Harmon never brought to Examiner Bell's attention his awareness, for example, of Mr. Brastad's purported prior invention of laminates of metallized polyester bonded to paper and paperboard learned through the James River-Golden Valley litigation[132].

Clearly, a reasonable examiner would have deemed a dispute as to the creation of the single-sided susceptor between James River and Golden Valley as being material

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[130] DX-18; Burnett T.T. 1/29/92 pp. 203-205, T.T. 1/30/92 pp. 6, 11-13.

[131] DX-420; Burnett T.T. 1/29/92 pp. 203-205, T.T. 1/30/92 pp. 6, 11-13.

[132] Harmon T.T. 1/24/92 pp. 67-68, 77, 78, 80-82, 84, 85, 151-154, T.T. 1/27/92 pp. 200-203; Burnett T.T. 1/29/92 pp. 203-205, T.T. 1/30/92 pp. 6, 11-13.

to the '513 application, especially considering the existence of the James River prior art product line which Golden Valley was able to obtain protection over in its '513 patent, such as through Claim 8, and considering the substantial documentation and information coming into Golden Valley's possession prior to the issuance of the '513 patent that related to James River's development and commercialization of the subject laminates. Yet, none of these documents or information were brought to the attention of Examiner Bell during prosecution of the '513 or '765 applications[133].

Messrs. Andreas and Harmon and the unrebutted testimony of Frank Burnett confirmed that 'the scope of Claim 8 of the '513 patent covered several of the prior art disclosures, including those of the Brastad '420 and '924 patents, the Pillsbury pizza tray, the Wyandot popcorn container, the Bohrer '010 and '882 references, and the Seiferth '005 patent. In obtaining Claim 8, among others, Golden Valley was able to bring to the bargaining table, in the James River litigation, claims on James River's own products, technology and patent disclosures, including claims which James River itself was unable to obtain from the Patent Office.

The relevance and materiality of the James River litigation is beyond question. James River's assertions against Golden Valley were material, though not necessarily acknowledged by Golden Valley, and these material asser-

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[133] Burnett T.T. 1/29/92 pp. 203-205, T.T. 1/30/92 pp. 6, 11-13.

tions should have been brought to the attention of Examiner Bell. Furthermore, Golden Valley was taking one position with regard to the James River litigation and another position on the purported disclosures of the prior art, and its materiality with the Patent Office, and these contradictions serve as admissions against Golden Valley and are material on their face. While Golden Valley could attempt to Portray James River's claims as mere bald assertions or as questionable claims, Golden Valley's own assertions and claims against James River are clearly material, especially where they contradict the representations made by Golden Valley during the prosecution of the '513 application[134].

VII. Inequitable Conduct With Respect to the '765 Patent

U.S. Patent No. 4,878,765 ('765) issued November 7, 1989 upon a March 28, 1988 continuation-in-part application of the application which led to the issuance of the '513 patent. James D. Watkins, David W. Andreas, and David H. Cox are the named inventors in the '765 patent and the patent is assigned to Golden Valley Microwave Foods, Inc[135]. There is a substantial relationship between the '513

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[134] DX-420; Chisum, T.T. 2/3/92 pp. 134-136; Burnett T.T. 1/29/92 pp. 172-174, 189, 203-205, T.T. 1/30/92 pp. 6, 11-13, 106.

[135] Stipulated Fact No. 7.

patent and its continuation-in-part application, the '765 patent[136].

James Harmon prosecuted both the application for the '513 patent and the '765 patent[137]. The application for the '765 patent was assigned to Examiner Bell and, because the '765 application was a continuation-in-part of the '513 patent, Examiner Bell was required to consider the prior art cited in the parent '513 patent prosecution[138]. During the prosecution of the '765 application, Golden Valley did not inform Examiner Bell of the abandoned '723 application or its prosecution history[139]. Furthermore, at no time during the prosecution of the '765 patent application did Golden Valley ever limit its claims solely to a laminate or flexible sheet apparatus having only two plies of paper attached to opposite sides of a susceptor[140].

Prosecution of the '765 patent appears to have been utilized by Golden Valley as an attempt to create an illusion of purging the omissions, mischaracterizations, misrepresentations and the erroneous affidavit submitted during the prosecution of the '513 application even though once the

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136 Stipulated Fact No. 10.

137 Stipulated Fact No. 11.

138 M.P.E.P. §2001.06(b).

139 Stipulated Fact No. 9.

140 See, JX-43, Col. 1; DX-271; Burnett T.T. 1/29/92 p. 192; Turpin T.T. 1/31/92 pp. 241-247.

prosecution on the '513 application closed, such "attempts" have absolutely no effect[141].

Golden Valley has acknowledged that the representations, testing and disclosures of the prior art which were made during the prosecution of the '765 application were made, in part, for purposes of the present litigation[142]. In the '765 application Mr. Harmon admitted that the Winters '427 patent was material and relevant, acknowledged for the first time that the Brastad '924 patent disclosed the utilization of a supporting (stabilizing) sheet for the susceptor, such as one made "of paperboard and the like," acknowledged for the first time that the Bohrer '010 patent disclosed a "pouch-style" flexible popcorn bag having a susceptor spot-glued to one of the sides. Harmon noticeably failed to disclose that Claim 8 of the '513 patent had already been granted and covered a construction of a susceptor bonded to a single sheet of paper identical to the prior art. During the prosecution of the '765 application, Mr. Harmon described the disclosures of the prior art for the purpose of distinguishing the prior art only from the three-ply paper-susceptor-paper claimed embodiments, as if none of the '765 claims addressed a single-sided susceptor construction. Mr. Harmon never acknowledged that the '513 patent had issued and that the '765 application pursued

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[141] Harmon T.T. 1/28/92 pp. 19-20; Burnett T.T. 1/29/92 pp. 205-207.

[142] Harmon T.T. 1/24/92 pp. 155-156, 158, T.T. 1/27/92 p. 167; Burnett T.T. 1/29/92 pp. 205-207.

claim coverage covering single-sided claims, notwithstanding his partial admissions in the '765 application that the prior art did disclose such single-sided susceptor constructions[143]. Even these partial admissions had no effect since they were not brought to the Examiner's attention for consideration, as a result of Mr. Harmon's withholding of these references from his PTO 1449 disclosure form[144].

During the prosecution of the '765 application Mr. Harmon finally acknowledged the existence of James River's Qwik Crisp technology heater pad products found in Pillsbury's pizza package and Wyandot's popcorn container. Harmon distinguished each of these references on the basis that neither of them taught or suggested the utilization of paper substrate materials on both sides of the susceptor material (notwithstanding the fact that Claims 8-14 of the '513 patent already covered the single-sided prior art products)[145]. However, these prior art references were still withheld from formal consideration[146].

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[143] DX-271; Harmon T.T. 1/24/92 pp. 149-164, T.T. 1/27/92 pp. 163-173; Burnett T.T. 1/29/92 pp. 205-207, 213-214.

[144] Burnett T.T. 1/30/92 pp. 168-172.

[145] DX-271, D10042, D10055-D10058; Harmon T.T. 1/24/92 pp. 153-157,T.T. 1/27/92 pp. 166, 167.

[146] DX-271, D10081-D10083; Burnett T.T. 1/30/92 pp. 168-172.

During the prosecution of the '765 application Mr. Harmon admitted that errors had occurred with regard to the wrong adhesive being utilized in the '513 application as well as with regard to the wrong sheet construction being shown in the Invention Test Material-Prior Art Test Material comparisons in the laboratory tests in support of the '513 application. He continued to conceal the many other disparities and differences that had occurred between those tests, including the fact that those tests involved solely a comparison of hand-made prior art samples versus machine made invention test materials[147].

During prosecution of the '765 application, Mr. Harmon submitted a new declaration, not signed by any of the inventors, but signed by Mr. Lawrence Brandberg, which stated that the testing errors committed in the '513 application were not material. This declaration withheld the fact that these newly submitted test materials compared a production, machine-made laminate for the Invention Test Material against a hand-made laminate for the Prior Art Test Material, with differences in pressures, drying exposures and laminate adhesive controls, etc[148]. Golden Valley also

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[147] DX-271, D10059-D10067; Harmon T.T. 1/24/92 pp. 159-189; Burnett T.T. 1/29/92, pp. 170-186, 194-197, 201-203, 205-207, 223-227.

[148] Brandberg T.T. 2/3/92 pp. 39-41, 44-46, 55-57, 65-68, 71-79; Harmon T.T. 1/24/92 pp. 159-189, T.T. 1/27/92 pp. 169-173.

withheld the fact that the '513 and '765 tests produced diametrically opposite results[149].

During the '765 prosecution Mr. Harmon never disclosed the existence of the '723 application[150] nor did he mention or disclose any information with regard to the '723 application or its foreign counterparts that would have alerted Examiner Bell that the test results being obtained in either set of comparative tests were wholly contradictory to the results obtained and represented by Mr. Harmon in the '723 application[151].

Clearly, the '723 application, its examination and the references and disclosures contained therein, would have been important to a reasonable examiner in deciding whether to allow the '765 patent to issue[152].

The existence and significance of the James River Qwik Crisp technology, the Brandberg '045 patent, and the Borek '573 patent were completely withheld from Examiner Bell during the prosecution of the '765 patent. The commercial acceptability and prior success of the Wyandot commercial popcorn container and Pillsbury pizza package were careful-

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[149] Harmon T.T. 1/24/92 pp. 169-189; Burnett T.T. 1/29/92 pp. 201-203, 207, T.T. 1/30/92 pp. 137-141, 183-186.

[150] Pre-trial Order Stip. 9

[151] DX-271; Harmon T.T. 1/24/92 pp. 157-162, T.T. 1/27/92 pp. 146-147; Burnett T.T. 1/29/92 pp. 170-186, 194-197, 201-203, 223-227.

[152] Burnett T.T. 1/29/92 pp. 170-186, 194-197, 201-203, 223-227.

ly mischaracterized. Further Mr. Harmon never disclosed the litigation with James River in which Golden Valley was charged with infringing James River's patents. Clearly, all this knowledge constituted information which a reasonable examiner would have considered important in deciding whether to allow the '765 patent to issue, which would have been material for the same reasons discussed above in reference to the '513 patent[153].

Mr. Brandberg did not possess the facts that he attested to in his declaration in support of the '765 application. Rather, he was told to sign the declaration, and he had no knowledge aside from what was being told to him by Mr. Harmon, and what was being written for him to sign by Mr. Harmon[154]. On February 13, 1989, attorney Harmon filed, in the '765 application, a Status Letter, a Supplemental Information Disclosure Statement and a Declaration of Lawrence C. Brandberg under 37 C.F.R. §1.132. In the Declaration, Brandberg averred that the affidavit filed in the '513 application contained "certain errors" which "[a]fter issuance of said patent, I became aware of..." Brandberg further averred that:

> I am unaware of any prior art packaging disclosure of the precise structure of the material termed 'Prior Art' in the September, 1987 affidavit from any

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153 DX-271.

154 Brandberg T.T. 1/29/92 pp. 18-23.

source prior to the invention claimed in U.S. Patent No. 4,735,513.

In making this averment, prepared by Mr. Harmon, Brandberg did not disclose the '723 application which had been filed by Watkins alone more than one year prior to the filing of the '513 application by Watkins, Andreas and Cox. Further, Brandberg did not disclose that the first susceptor-paper laminates used by Golden Valley in a popcorn bag were not its creation, but were obtained from James River[155].

In making the Declaration that a bag or container having an exposed susceptor did not provide a product which was "suitable for commercial use," Brandberg did not acknowledge, or apparently test, the Wyandot container. Indeed, in the "Supplemental Information Disclosure Statement" which accompanied the Declaration, attorney Harmon stated: "It is the applicant's information and belief that the Wyandot container of this configuration is no longer being marketed and is therefore not a commercially successful product at this time." Clearly the Wyandot container was a successful commercial product and the inventors knew that when they submitted it for testing in 1984, prior to the development of the Golden Valley susceptor bag. The actual Wyandot container should have also been utilized in any comparison test for submission in Brandberg's Declaration. Mr. Cox

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[155] DX-271, D10061; Harmon T.T. 1/24/92 pp. 55, 56, 69-70, 154, 155; Burnett T.T. 1/29/92 pp. 170-186, 194-197, 223-227, T.T. 1/30/92 pp. 14-25.

testified that when he tested the Wyandot container in 1984, the popcorn popped "satisfactorily."[156]

During the prosecution of the '765 application, Golden Valley further withheld the fact that substantial differences occurred between the results of the '765 test and the first '513 tests, where less deterioration occurred notwithstanding the representations that the "errors" of the '513 tests were purportedly not material to their results[157]. No effort was made to identify or explain those differences despite Mr. Brandberg's transmittal of both test results to Mr. Harmon[158].

VIII. The Withheld Information Was Not Cumulative

The information that Examiner Bell had in his possession did not even remotely approach the materiality of the information Golden Valley withheld from and mischaracterized to him during the prosecution of the '513 and '765 patents. No substitutes existed for the information and disclosures that Examiner Bell should have been

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156 DX-271; Cox T.T. 1/28/92 pp. 83-85; Andreas T.T. 1/23/92 pp. 141-143; Harmon T.T. 1/27/92 pp. 129-130; Burnett T.T. 1/29/92 pp. 155-156, T.T. 1/30/92 pp. 48, 51, 53.

157 DX-271, D10066.

158 Brandberg T.T. 1/29/92 pp. 44-46, 71-79; DX-271, D10064-D10067; Harmon T.T. 1/24/92 p. 158; Burnett T.T. 1/29/92 pp. 201-203, T.T. 1/30/92 pp. 137-141, 183-186; Turpin T.T. 1/31/92 pp. 43-47, 68, 200-211.

apprised of that would justify Golden Valley's withholding of the existence of the '723 application, the representations of the invention in the '513 application, the nondisclosed prior art, the mischaracterized prior art, the fraudulent affidavit and testing information, the revelations of the litigation between James River and Golden Valley, and the knowledge of the inventors that, at best, the invention resided in the utilization of a paper-susceptor-paper laminate, in a three-ply configuration, in which the susceptor was bonded on each side to a separate adhesively laminated paper ply[159].

Examiner Bell, for example, was not aware of the existence of the prior abandoned '723 application and, accordingly, could not possibly know (a) that the same or equivalent subject matter was pursued, though rejected, by Examiner Bell who was experienced in the microwave cooking art, (b) the highly relevant prior art that was cited by Examiner Weinstein, (c) the appropriate interpretation of that prior art, (d) that the susceptor laminate material described and utilized in that application was expressly described as a prior product of another company, and (e) the crucial comparative testing representations of the '723 application that completely contradicted the '513 comparative tests conducted less than three years later to obtain allowance of the '513 patent. Nor did Examiner Bell know

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[159] Andreas T.T. 1/21/92 pp. 189-194; Cox T.T. 119-121.

that the true structures of much of the prior art had been acknowledged in internal Golden Valley opinion reports[160].

Examiner Bell did not possess information or prior art of any kind relating to Pillsbury's commercial susceptor pizza package, the Wyandot commercial susceptor popcorn package, or James River's commercial Qwik Crisp technology product, which, if disclosed, would have informed the Examiner of not only the existence of susceptor to paper laminates and susceptor to paperboard laminates, but also would have informed him of their actual commercial use and success in the marketplace. Examiner Bell had no way of knowing about the commercial acceptance of a popcorn product incorporating a susceptor-to-paper material laminate. Such knowledge would have identified the actual source for Golden Valley's purported "invention" and would also have subjected many, if not most, of the representations of the comparative testing reports to actual scrutiny[161].

Neither the Watkins '180, Gades '280, or Watkins '826 references, which were disclosed to Examiner Bell, were as relevant and material as the withheld Brandberg '045 patent since the '045 reference discloses, in the environment of a nonspecialty popcorn bag construction, and through a single reference, the utilization of a two-ply popcorn bag, in which one ply comprises kraft paper and "the other ply comprises a separate layer of greaseproof glasine paper for construction of the popcorn package at issue.

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160 DX-420.

161 DX-555; DX-18; DX-408A; DX-468.

With regard to the Winters '427 and Borek '573 patents, Examiner Bell was not in possession of any other prior art that even remotely addressed the interpositioning of a heat insulating or heat generating susceptor-type material between two plies of paper, for coated or adhesively bonded lamination therebetween, to form a sandwich structure[162].

With regard to the mischaracterized art, namely the mischaracterizations associated with the two Brastad references (Brastad '420 and Brastad, et al. '924), the unidentified disclosures of the Bohrer '010 patent and the Bohrer '882 patent, as well as the '005 patent disclosures of Seiferth (which disclosures were represented as being unacceptable, inoperative and purportedly distinguishable, through the comparative test studies, by Applicant's purported three-ply paper-to-susceptor-to-paper "invention"), the withheld Wyandot container, the Pillsbury pizza tray, the Qwik Crisp technology, and the withheld '723 application, absolutely no other references disclosed the utilization of a susceptor-to-paper material support substrate, through adhesive lamination, that would enable utilization of the laminate without scorching, shriveling and burning[163].

With regard to the affidavit signed by Messrs. Watkins, Cox, and Brandberg in which erroneous test results were reported, no other information in the possession of Examiner

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[162] JX 28; JX 22; Andreas T.T. 1/21/92 pp. 189-194; Turpin T.T. 1/31/92 pp. 157-159; Burnett T.T. 1/29/92 pp. 124-127, 135, 139-144, 162-165, T.T. 1/30/92 pp. 47, 49-52, 71-73, 114-121.

[163] JX 27; JX 23; JX 37; JX 40; JX 39.

Bell would have revealed that Golden Valley was submitting comparative tests based on hand-made structures versus production structures, with the inherent differences of the wrong adhesives, the wrong amounts of those adhesives, the lack of appropriate laminating pressure, the differences in paper compositions to which the susceptors were being bonded, as well as the complete lack of drying or curing relevant to the prior art invention test materials. As indicated above, absolutely no information was in the possession of Examiner Bell which would have revealed that the test results reported in the '513 application were in complete contradiction to the test results reported in the '723 application (in which a single-sided susceptor to paper laminate functioned satisfactorily without scorching, shriveling or burning[164].

With regard to the revelations of the James River-Golden Valley litigation, Examiner Bell was not in possession of any of the documentation and/or information arising out of that litigation which would, at the very minimum, have prompted serious questions as to inventorship of the susceptor-to-paper laminate concept, the source of Golden Valley's purported "invention" and the commercial use and existence of James River's Qwik Crisp technology--long before Golden Valley ever acquired it, utilized it for its own commercial purpose, and obtained patent protection over the very same structures[165]. Moreover, no other information

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[164] DX-263, D012, D048 to D050, at D049; DX-261.

[165] DX-408A; DX-420; DX-468; DX-469, DX-470.

would have revealed Golden Valley's internal recognition of the prior art and its materiality, and no other information would have directed attention to the serious issues of inventorship[166].

Additionally, Examiner Bell was not in possession of any information or disclosures that would have revealed to him the fact that all the inventors of the '513 "invention" believed that any invention being pursued by Golden Valley would have to have been limited to the three-ply laminate (a bonded laminate sandwich of susceptor material between two adhesively attached sheets of stabilizing paper--one on each side)[167].

IX. Knowledge of the Materiality of the Withheld Information

The evidence is clear and convincing that the inventors and their attorney, Mr. Harmon, knew of their duty to disclose material information to the Patent Office and knew that the information not disclosed was material. First, it should be noted that only five persons were involved, the three inventors (Andreas, Watkins, and Cox), the one declarant (Brandberg), and one attorney (Harmon). Golden Valley at that time was not a large organization where the

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166 DX-420.

167 Cox T.T. 1/28/92 pp. 119-121; Andreas T.T. 1/21/92 pp. 188-189; Burnett T.T. 1/29/92 pp. 189-190, T.T. 1/30/92 p. 106; Turpin T.T. 1/31/92 pp. 163-166.

inventors were far removed from each other or from their patent counsel. Both Watkins and attorney Harmon knew of the '723 application and the fact that they could not get broad claims allowed. All the inventors knew of the Wyandot package, and Watkins discussed the Wyandot package with Harmon "prior to the filing of any patent applications directed to the use of susceptors at Golden Valley"[168], and before the issue date of the '513 patent. Harmon and the inventors also knew of the James River susceptor technology and that Golden Valley was being charged with infringing James River's susceptor technology patents. There can be no basis for concluding that anyone involved with the '513 application and the '765 application was unaware of the materiality of the undisclosed information. Of course, attorney Harmon had the responsibility of disclosing to the Patent Office material information disclosed to him by the inventors. They failed to discharge that responsibility[169]. Moreover, many, if not all, of the decisions and efforts associated with the '723, '513 and '765 applications arose out of "mutual discussion and agreement"

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[168] Watkins T.T. pp. 308-310.

[169] Andreas T.T. 1/22/92 pp. 15-17; Harmon T.T. 1/23/92 pp. 173-181, T.T. 1/24/92 pp: 44-47, 66-67, 125-126, 195-206, 211, T.T. 1/27/92 pp. 8, 11, 79-81, 175-177; Burnett T.T. 1/29/92 pp. 116-117, 207-208, T.T. 1/30/92 pp. 25-27, 66, 156, 157; Chisum T.T. 2/3/92 pp. 96-97, 136-139.

among the Golden Valley inventors, the attorneys, and the declarant[170].

X. Intent to Mislead the United States Patent Office

The evidence is clear and convincing that the conduct and actions reviewed above demonstrate an intent to mislead Examiner Bell, which intent came to fruition in the issuance of the '513 and '765 patents. The evidence and facts reviewed do not consist of one isolated instance of an inadvertent, accidental, negligent, or even grossly negligent action. Rather, the evidence and facts reviewed demonstrate a consistent repetitious effort to withhold from the Patent Office information which, under normal circumstances would have been disclosed, such as the existence of the '723 application. The facts include too many instances of the withholding of material information for any conclusion to be reached other than that the withholding and mischaracterizations were done with the intent to mislead the Patent Office. The information withheld and mischaracterized was not marginally material information, but was, instead, information which went to the very heart of the right to a patent. This is apparent from the types and nature of information withheld. For example, failing to disclose the source of Golden Valley's basic susceptor technology (James River), failing to disclose the most material prior art and inconsistent test results, submitting a

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[170] Harmon T.T. 1/27/92 pp. 208-209, 213-214.

fraudulent affidavit that, but for its submission, would have rendered the '513 application unpatentable, and claiming the James River technology and then not disclosing to Examiner Bell that james River had charged Golden Valley with infringement of their patents, can only be deemed intentional, which among all the other above-described omissions and mischaracterizations did not arise by accident[171].

Accordingly, this court finds that the nature, extent and severity of misrepresentations, omissions and falsified data presented to the Patent Office constitutes clear and convincing evidence of a pattern of conduct undertaken with intent. In view of the materiality of these omissions, mischaracterizations and fabrications, in view of Golden Valley's knowledge of them, and particularly Mr. Harmon's knowledge of and participation in the vast majority of them, in view of Golden Valley's knowledge of the materiality of this information, and the repeated attempts to mislead an examiner not necessarily experienced in the subject matter, into granting both the '513 and '765 applications, there can be no question that Golden Valley engaged in inequitable conduct before the United States Patent and Trademark Office relevant to each of these applications. Moreover, inasmuch as the parties have stipulated that there is a substantial relationship between the '513 patent and the '765 patent (Pre-trial Order Stip. 10), it is this court's finding that the '513 and '765 patents are both rendered unenforceable as a result of Plaintiff's inequitable conduct. It is also

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[171] Burnett T.T. 1/29/92 pp. 208-214.

this court's finding that the materiality of what was engaged in by Golden Valley exceeds that of information merely reasonably important to an Examiner so as to reach a level of materiality to establish a prima facie case of invalidity of the patents. This court finds that but for Golden Valley's inequitable conduct, neither the '513 patent nor the '765 patent would ever have issued.

Conclusions of Law

This court has jurisdiction pursuant to 28 U.S.C. §1338. Jurisdiction over the parties is conceded by counsel.

The possession and assertion of patent rights are "issues of great moment to the public." Hazel-Atlas Glass Co. v. Hartford-Empire Co., 64 S.Ct. 997, 1001 (1944). As stated by the Supreme Court:

> A patent by its very nature is affected with a public interest. As recognized by the Constitution, it is a special privilege designed to serve the public purpose of promoting the "Progress and Science and useful Arts." At the same time, 'a patent is an exception to the general rule against monopolies and to the right to access to a free and open market. The far-reaching social and economic consequences of a patent, therefore, give the public a paramount interest in seeing that patent monopolies spring from backgrounds free from

> fraud or other inequitable conduct and that such monopolies are kept within their legitimate scope.
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> * * *
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> Those who have applications pending with the Patent Office or who are parties to Patent Office proceedings have an uncompromising duty to report to it all facts concerning possible fraud or inequitableness underlying the applications in issue.

Precision Instrument Mfg. Co. v. Automotive Maintenance Machinery Co., 65 S.Ct. 993, 998, 999 (1945).

Inequitable conduct consists of failure to disclose material information, or submission of false material information, with an intent to deceive, and those two elements, materiality and intent, must be proven by clear and convincing evidence. Kingsdown Medical Consultants Ltd. v. Hollister, Inc., 863 F.2d 867, 872 (Fed. Cir. 1988); J.P. Stevens & Co., Inc. v. Lex Tex Ltd., Inc., 747 F.2d 1553, 1559 (Fed. Cir. 1984).

The Federal Circuit has set out the burdens of proof as follows:

> [O]ne who alleges a "failure to disclose" form of inequitable conduct must offer clear and convincing proof of: (1) prior art or information that is material; (2) knowledge chargeable to applicant of that prior art or information and of its materiality; and (3) failure of the

> applicant to disclose the art or information resulting from an intent to mislead the PTO. That proof may be rebutted by showing that: (a) the prior art or information was not material (e.g., because it is less pertinent than or merely cumulative with prior art or information cited to or by the PTO); (b) if the prior art or information was material, a showing that applicant did not know of that art or information; (c) if applicant did know of that art or information, a showing that applicant did not know of its materiality; (d) a showing that applicant's failure to disclose art or information did not result from an intent to mislead the PTO. (footnote omitted).

FMC Corp. v. Manitowoc Co., Inc., 835 F.2d 1411, 1415 (Fed. Cir. 1987). The duty of candor extends throughout the patent's entire prosecution history. Fox Industries v. Structural Preservation Systems, 922 F.2d 801, 803 (Fed. Cir. 1990). A breach of the duty of candor early in the prosecution may render unenforceable all claims which eventually issue from the same or related application. Id. at 804. Furthermore, withholding information from the Patent and Trademark Office may "soil the patentee's hands" so as to render all patents-in-suit unenforceable. Precision Instrument, supra, at 999; Consolidated Aluminum Corp. v. Foseco Int'l Ltd., 910 F.2d 804, 812 (Fed. Cir. 1990). As the Federal circuit has consistently held:

> Once a Court concludes that inequitable conduct (has) occurred, all the claims - not just the particular claims to which inequitable conduct is directly connected - are unenforceable.

J.P. Stevens & Co. v. Lex Tex Ltd., 747 F.2d 1553, 1561 (Fed. Cir. 1984). As a result, Golden Valley's inequitable conduct before the Patent Office as to the '513 patent renders the '513 patent-in-suit entirely unenforceable, and as to the '765 patent renders the '765 patent-in-suit entirely unenforceable.

An omission or misrepresentation must be "material" in order to serve as the basis for an inequitable conduct charge. "[I)nformation is material where there is a substantial likelihood that a reasonable examiner would consider it important in deciding whether to allow the application to issue as a patent." 37 C.F.R. §1.56(a). Where the art and/or information that was allegedly withheld is not as pertinent as that considered by the examiner, or is merely cumulative to that considered by the examiner, such art and information is not material. Scripps Clinic & Research Foundation v. Genentech, Inc., 927 F.2d 1565, 1582 (Fed. Cir. 1991); Halliburton Co. v. Schlumberger Technology Corp., 925 F.2d 1435, 1440 (Fed. Cir. 1991). However, materiality may be established by a showing that a reasonable examiner would consider the withheld prior art important in deciding whether to issue the patent. Merck & Co., Inc. v. Danbury Pharmacal, Inc., 873 F.2d 1418 (Fed. Cir. 1989). "To be guilty of inequitable conduct, one must have intended to act inequitably." FMC Corp v. Manitowoc Co., Inc., 835 F.2d 1411, 1415 (Fed. Cir. 1987). Whether the intent element of inequitable conduct is present cannot always be inferred from a pattern of conduct that may be

described as gross negligence. That conduct must be sufficient to require a finding of deceitful intent in light of all the circumstances. Kingsdown, 863 F.2d at 873. Intent need not be proven by direct evidence and it is most often proven by a showing of acts the natural consequences of which are presumably intended by the actor. Merck & Co. v. Danbury Pharmacal, Inc., 873 F.2d 1418, 1422 (Fed. Cir. 1989). In fact, direct proof of wrongful intent is rarely available but may be inferred from clear and convincing evidence of the surrounding circumstances. LaBounty Manufacturing, Inc. v. United States International Trade Comm'n, 958 F.2d 1066, 1076 (Fed. Cir. 1992). Nevertheless, a finding that particular conduct amounts to "gross negligence" does not of itself justify an inference of intent to deceive; the involved conduct, viewed in light of all the evidence, including evidence indicative of good faith, must indicate sufficient culpability to require a finding of intent to deceive. Kingsdown, 863 F.2d at 976. Furthermore, materiality of an undisclosed reference does not presume an intent to deceive. Allen Organ Co. v. Kimball Int'l. Inc., 839 F.2d 1556, 1567 (Fed. Cir. 1988). The more material the omission, the less culpable the intent required, and vice versa. Halliburton Co. v. Schlumberger Technology Corp., 925 F.2d 1435, 1439 (Fed. Cir. 1991). A mere showing that references having some degree of materiality were not disclosed does not establish inequitable conduct. Id. at 1442.

In addition to the above-cited case law, the court takes notice of the standards expressed in the Patent Office's Manual on Patent Examining Procedure (MPEP), which is commonly relied upon as a guide to patent attorneys and

patent examiners on procedural matters[172]. Specifically, the court takes notice that the MPEP provides:

> 2001.06(b) Information Relating to or From Co-pending United States Patent Applications
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> The individuals covered by 37 CFR 1.56(a) have a duty to bring to the attention of the examiner, or other Office official involved with the examination of a particular application, information within their knowledge as to other copending United States applications which are "material to the examination" of the application in question.
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> * * *
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> Accordingly, the individuals covered by §1.56(a) cannot assume that the examiner of a particular application is necessarily aware of other applications "material to the examination" of the application in question, but must instead bring such other applications to the attention of the examiner. For example, if a particular inventor has differ-

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[172] The MPEP does not have the force of law, but is entitled to notice so far as it is an official interpretation of statutes or regulations with which it is not in conflict. Litton Systems, Inc. v. Whirlpool Corp., 728 F.2d 1423, 1439 (Fed. Cir. 1984).

> ent applications pending in which similar subject matter but patentably indistinct claims are present that fact must be disclosed to the examiner of each of the involved applications. Similarly, the prior art references from one application must be made of record in another subsequent application if such prior art references are "material to the examination" of the subsequent application.
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> * * *
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> 2001.06(c) Information From Related Litigation
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> Where the subject matter for which a patent is being sought is, or has been involved in litigation, the existence of such litigation and any other material information arising therefrom must be brought to the attention of the Patent and Trademark Office; such as, for example, evidence of possible prior public use or Bales, questions of inventorship, prior art, allegations of "fraud", "inequitable conduct" or "violation of duty of disclosure".

These provisions of the M.P.E.P, as well as other pertinent provisions, will be discussed below.

Applying the principles discussed above, the court first finds that Golden Valley failed to disclose the '723 applica-

tion, which was materially related to the '513 application, and further, that it was material for Examiner Bell to have been informed of the '723 application and its prosecution history. Initially, the court finds that it was important for Examiner Bell to know that another knowledgeable Patent Examiner had carefully examined and rejected all claims of the '723 application, including claims that were directly related to claims in the '513 application, on the grounds that the claims were obvious in light of prior art patents.

Also, Examiner Weinstein's extensive discussion of the prior art patents would have been an important source of information for Examiner Bell. Examiner Weinstein had cited to 23 prior art patents, and had discussed many of them in detail[173]. Examiner Bell, deprived of the benefit of this discussion, was forced to conduct his own independent search and located only one prior patent that he believed to be relevant[174]. The patent was for a reflective life jacket[175], and was an entirely different technology from that under consideration in the application for the '513 patent. Golden Valley made representations to Examiner Bell about the testing of the susceptors which completely contradicted representations Golden Valley had made to Examiner Weinstein. specifically, as discussed in great detail in the factual findings, Golden Valley represented in its '723 application to Examiner Weinstein that it had performed extensive tests on James River's susceptor products which proved that susceptors only needed to be bonded on one side (with the other side in direct contact

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173 DX263, pp. D35-D36 and D53-D57.

174 JX261; DX 261 p. D43.

175 Id., citing Ebneth U.S. Pat. No. 4,390,588, JX32.

with the food) to prevent shrivelling, scorching, burning, and disintegration[176]. Golden Valley, in an affidavit detailing test results, made diametrically inconsistent representations to Examiner Bell during prosecution of the application for the '513 patent, namely that when a James River (Seiferth) susceptor was bonded on only one side, it always shrivelled, scorched, burned and disintegrated[177]. The court finds that it was critical for Examiner Bell to have known that a key representation Golden Valley made to him was completely inconsistent with a representation Golden Valley had made earlier to Examiner Weinstein.

The M.P.E.P, at §2004 (Item 8)[178], provides:

> Care should be taken to see that inaccurate statements or inaccurate experiments are not introduced into the specification, either inadvertently or intentionally. For example, stating that an experiment "was run" or "was conducted" when in fact the experiment was not run or conducted is a misrepresentation of the facts. No results should be represented as actual results unless they have actually been achieved. Paper examples should not be described using the past tense. See §§608.01(p) item D and 707.07 (1). Also misrepre-

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176 DX263, p. D48-D49, D12 and D15.

177 DX261, p. D96-D126.

178 DX305.

> sentations can occur when experiments which were run or conducted are inaccurately reported in the specification, e.g. an experiment is changed by leaving out one or more ingredients. (Citation omitted).

Clearly, providing examples of purported experimental test results as part of a patent application submission, where such examples "do not correspond exact[ly]" to the actual experiments performed, can form the basis for a finding of inequitable conduct. Steierman v. Connelly, 192 U.S.P.Q. 433 (Bd. of Pat. App. & Int. 1975); 192 U.S.P.Q. 446 (Bd. of Pat. App. & Int. 1976).

In addition, inequitable conduct exists where inconsistent or contradictory representations in prior related patent applications are coupled with submission of an affidavit directed to "testing" that created the misleading inference that it constituted "a complete and accurate analysis of all the testing, instead of an edited version thereof." Monsanto Co. v. Rohm & Haas Co., 456 F.2d 592, 599-600 (3d Cir. 1972). Thus, there is a duty to disclose or to even go so far as to "red flag" contradictory information with regard to test results, where results appear to be in sharp contrast with what the applicant is telling the Patent Office, since the Patent Office is incapable of verifying comparative tests and has to rely upon the candor of the parties submitting those test results[179].

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[179] Chisum T.T. 2/3/92 p. 140.

Test results that are contradictory to those of an earlier application should be disclosed to the examiner[180]. Moreover, the best embodiment of the prior art available must be used in a test comparing the invention to the cited prior art in support of an argument of patentability. Norton v. Curtis, 433 F.2d 779, 794-95 (C.C.P.A. 1970). As discussed in detail in the factual findings, Golden Valley did not use the most commercially accepted prior art during the '513 and '765 testing when it tested "simulations" of the prior art, instead of the actual prior art commercial Wyandot popcorn package.

The court further finds that Golden Valley had made a number of representations about prior patents to Examiner Weinstein during prosecution of the '723 application which were important for Examiner Bell to know, but which were not disclosed to Examiner Bell. First, the '513 application did not cite the Brandberg '045 patent which had issued to Messrs. Andreas and Brandberg, which the '723 application described as "representative of the prior art."[181] Second, the '513 patent application did not cite the Borek '573 patent which was cited and discussed by Examiner Weinstein. The prosecution of the '513 patent also failed to include any reference to the McHam '332 patent. All of these patents were cited by Golden Valley to Examiner Weinstein, and were found by Examiner Weinstein to be controlling[182].

Additionally, Golden Valley did not file its Prior Art Notice with Examiner Bell (which cited only a portion of the references cited during the '723 application prosecution)

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180 Chisum T.T. 2/3/92 p. 106.

181 DX262, p. D6.

182 See DX263, pp. D30-D37 and D52-D58.

during the prosecution of the application for the '513 patent until September 4, 1986[183] after Examiner Bell had already allowed certain claims of the '513 patent on June 3, 1986[184], even though the case law and the Manual of Patent Examining Procedure (M.P.E.P.) §2002.03(a) and §2003 state that such references must be cited to the Examiner promptly and as soon as the applicant is aware of the references.

Failure to inform the Patent Office of a material co-pending patent application amounts to a failure to comply with the duty of disclosure under Rule 56 (37 C.F.R. §1.56 (a)). Lutzker v. Plet, 7 U.S.P.Q.2d 1214, 1221 (Bd. Pat. App. & Int. 1988). Individuals covered by 37 C.F.R. §1.56(a) have a duty to bring to the attention of the examiner of a particular application information within their knowledge as to other United States patent applications which are "material to the examination" of the application in question, even where such applications are not co-pending. M.P.E.P §§2001.01, 2001.06(b), 2004 (Item 9). Information in a prior application that is material to the prosecution of a subsequent application should be disclosed and there is no doubt about the importance to disclose that information.[185]

Further, there is a positive duty to cite relevant prior art identified in one patent application prosecution within the prosecution of an application directed to a related subject matter. The '513 application did not disclose to Examiner Bell all prior art references cited by Examiner Weinstein in

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[183] DX261, pp. D44 and D48

[184] DX261, p. D41.

[185] Chisum T.T. 2/3/92 pp. 103-106.

the '723 application, even though the M.P.E.P., at §2004 (Item 9), cautions that:

> [i]t is desirable to be particularly careful that prior art or other information in one application is cited to the examiner in other applications in which it would be material.

The M.P.E.P. also states, at §2001.06(b), that:

> the prior art references from one application must be made of record in another subsequent application if such prior art references are "material to the examination" of the subsequent application.

An applicant's failure to advise the patent examiner of an inconsistent position taken during a prior Patent Office proceeding and whether such failure to advise "might have been motivated - in part at least - by [the applicant's] hope that this nugget of information would not surface during the patent examiner's required study" is relevant to the issue of whether inequitable conduct was committed. Mechanical Plastic Corp. v. Rawlplug Co. Inc., 14 U.S.P.Q.2d 1058, 1061 (S.D.N.Y. 1989).

The court finds by clear and convincing evidence that Golden Valley deliberately withheld the existence of the '723 application from Examiner Bell, and that the '723 application and prosecution history were material to Examiner Bell's consideration of the application for the '513 patent and the application of the '765 patent. The court thus concludes that Golden Valley breached its duty to the Patent

Office by failing to disclose the '723 application to Examiner Bell.[186] The court further finds by clear and convincing evidence that Golden Valley filed a materially misleading affidavit in August 1987 (which inaccurately described the results of the comparative testing) which caused the '513 patent to issue.

With respect to the James River litigation, this court holds that there is a duty to disclose the existence of material information that may be brought out in related litigation that is pertinent to patentability. If evidence comes to light that is contrary or in conflict with assertions being made in the application, those would be deemed material to a reasonable examiner[187]. It is the "material information" and not the mere existence of a lawsuit that needs to be brought to the attention of the examiner with regard to related litigation. If material information, such as supporting test data, prior art, etc., comes to an applicant's attention as a result of assertions in the lawsuit, then there is an obligation to disclose that to the examiner. Any assertion that is made by a litigant, such as Golden Valley, during litigation, which is contradictory to the assertions made by Golden Valley to the patent examiner, comprises material information, representations, and contradictions that should have been brought to the attention of the Examiner Bell[188]. Accordingly, the court finds that Golden Valley's failure to bring such material information regarding its litigation with James River over James River's prior art technology and products eventually claimed and covered by the '513 and '765

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186 Id.

187 Chisum T.T. 2/3/92 pp. 86-87.

188 Chisum T.T. 2/3/92 pp. 134-136.

patents, while the '513 and '765 applications were being prosecuted, as set forth in the court's findings of fact, violated the duty of disclosure under 37 C.F.R. §1.56(a), as well.

The court further holds that it is likewise a violation of the duty of candor and fair dealing with the Patent Office for an applicant or its attorney to disclose a pertinent prior art patent reference to the examiner in such a way as to "bury" it or its disclosures in a series of disclosures of less relevant prior art references, so that the examiner would be likely to ignore the entire list and permit the application to issue. The M.P.E.P, at §2011 (Item 4), specifically states that "the prior art has to be brought to the attention of the examiner in an adequate fashion," quoting from Penn Yan Boats, Inc. v. Sea Lark Boats, Inc., 359 F.Supp. 948, 964 (S.D.Fla. 1972). While Mr. Harmon disclosed the Bohrer, et al. '010 and '882 patents by number, he withheld the existence of an embodiment of a flexible popcorn bag with a bonded susceptor disclosed in those patents, while disclosing (or mischaracterizing) the subject matter of less relevant references.

The duty of candor further requires the disclosure to the examiner of any material information relevant to the new subject matter included in a continuation-in-part application (the '765 application), which is not disclosed in the parent application, and which occurred between the time of the filing of the parent application and the filing of the continuation-in-part application[189].

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[189] M.P.E.P. §§201.11 and 2004 (Item 14).

It is clear to the court that the purpose of the Affidavit of Brandberg, Cox, and Andreas dated August 31, 1987[190], was to overcome prior art rejections that had been entered by the examiner. Golden Valley wished to overcome those rejections by demonstrating the allegedly superior performance of the claimed invention when compared with the comparable structure of the cited prior art Seiferth '005 patent. Claims 1-22 and 27 of the '513 patent were then allowed after presentation of the Affidavit, wherein the affiants, Messrs. Brandberg, Cox, and Andreas stated:

> 20. From the results the Affiants conclude that the prior art samples were unsuitable for commercial use. The present invention overcame these problems and exhibited commercially satisfactory microwave heating characteristics.

Accordingly, the court finds that the Affidavit and the misrepresentations contained therein were material. Rohm and Haas Co. v. Crystal Chemical Co., 722 F.2d 1556, 1571 (Fed. Cir. 1983). Furthermore, the false and misleading representations and omissions in the Affidavit supporting the '513 application, as well as the Declaration supporting the '765 application[191] were material.

Additionally, the court finds that Golden Valley and its attorney, Mr. Harmon, were well aware of the importance

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190 DX 17.

191 DX 99.

and materiality of the withheld, mischaracterized and misrepresented information to a reasonable examiner's decision to issue the '513 and '765 patents.

To attempt during the prosecution of a patent to use or overcome misconduct consisting of intentional misstatements of asserted material facts so as to save any issued patent arising out of that prosecution from the consequences of such inequitable conduct, the applicant must, while the application is still pending: (1) expressly advise the Patent Office of the misstatements and/or facts, stating specifically where they reside; (2) if the misrepresentation is of one or more facts, advise the Patent office what the actual facts are, while making it clear that further examination may be required if any Patent Office action was based on the misrepresentation; and (3) on the basis of the new and factually accurate record, the applicant must establish patentability of the claimed subject matter. Rohm and Haas Co. v. Crystal Chemical Co., 722 F.2d 1556, 1572 (Fed. Cir. 1983). Golden Valley did none of the foregoing while the '513 application was pending and accordingly did not "cure" the inequitable conduct concerning the prosecution of the '513 patent. Where inequitable conduct has occurred during prosecution, it cannot be purged or cured after the patent has issued. In re Clark, 522 F.2d 623,627-28 (C.C.P.A. 1975). As stated in Rohm and Haas, the issue or concern of inequitable conduct has to be undertaken during the prosecution of the patent application at issue. Golden Valley could not have purged or cured its inequitable conduct even through the institution of a post-issuance procedure such as Reissue with respect to the '513 patent, because Reissue requires that a patent be "deemed wholly or partly inoperative or invalid" through "error without any deceptive intention." 35 U.S.C. §251. Accordingly, Reissue is not available to cure such inequitable conduct with respect

to knowingly withheld material prior art or other information. Thus, once the '513 issued Golden Valley could not "cure" its inequitable conduct even through Reissue, much less through the continuation-in-part '765 patent, or otherwise.

In summary, the court finds that Golden Valley: (1) deliberately concealed its prior '723 application, which contained representations of prior inconsistent test results and critical prior art references; (2) filed false, misleading affidavits during the prosecution of both the '513 and '765 patents; (3) failed to disclose litigation with James River which disclosed the true origins of the "invention" at issue; (4) failed to cite and/or mischaracterized relevant prior art; and (5) unlawfully claimed the James River heater pad technology as its invention. Each of these acts constituted an omission of known material information or a knowing misrepresentation of material information, and was undertaken with the intent to mislead Examiner Bell as he examined the '513 and '765 patent applications.

The court finds that Golden valley has committed multiple acts of inequitable conduct during the prosecution of the '513 and '765 patents and, therefore, the court finds in favor of the defendants on their affirmative defense of inequitable conduct. Accordingly, the '513 and '765 patents are hereby ADJUDGED AND DECREED to be unenforceable and judgment is hereby entered in favor of Weaver Popcorn Co., Inc. and American Packaging Corp.

Enter: July 22, 1992.

William C. Lee, Judge
United States District Court

APPENDIX C

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF INDIANA

GOLDEN VALLEY MICROWAVE FOODS, INC.

v. **JUDGMENT IN A CIVIL CASE**

WEAVER POPCORN COMPANY, INC.;
BEATRICE/HUNT WESSON, INC.;
AMERICAN PACKAGING CORPORATION

CASE NUMBER: F 88-00251

☐ **Jury Verdict.** This action came before the Court for a trial by jury. The issues have been tried and the jury has rendered its verdict.

☒ **Decision by Court.** This action came to trial ~~of hearing~~ before the Court. The issues have been tried ~~or heard~~ and a decision has been rendered.

IT IS ORDERED AND ADJUDGED judgment is entered in favor of the Defendants, Weaver Popcorn Co., Inc. and American Packaging Corp., and against the Plaintiff Golden Valley Microwave Foods, Inc., as more fully set forth in the Memorandum Decision and Order entered this date, finding in favor of the defendants on their affirmative defense of inequitable conduct.

This cause was dismissed as to the defendant Beatrice/Hunt Wesson, Inc. on April 19, 1991.

July 22, 1992

Geraldine J. Crockett, Clerk
Lana R. Melton, Deputy Clerk

APPENDIX D

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF INDIANA

GOLDEN VALLEY MICROWAVE FOODS, INC.

v.

AMENDED JUDGMENT IN A CIVIL CASE

WEAVER POPCORN COMPANY, INC.;
BEATRICE/HUNT WESSON, INC.;
AMERICAN PACKAGING CORPORATION

CASE NUMBER: F 88-00251

☐ **Jury Verdict.** This action came before the Court for a trial by jury. The issues have been tried and the jury has rendered its verdict.

☒ **Decision by Court.** This action came to trial ~~of hearing~~ before the Court. The issues have been tried ~~or heard~~ and a decision has been rendered.

IT IS ORDERED AND ADJUDGED judgment is entered in favor of the Defendants, Weaver Popcorn Co., Inc. and American Packaging Corp., and against the Plaintiff Golden Valley Microwave Foods, Inc. Uninted States Patents Nos. 4,735,513 and 4,878,765 are adjudged to be unenforceable.

This cause was dismissed as to the defendant Beatrice/Hunt Wesson, Inc., on April 19, 1991.

EQUIVALENT COUPON-ISSUE YIELD: 4.11%

July 23, 1992

Geraldine J. Crockett, Clerk
/s/ Lana R. Melton, Deputy Clerk

APPENDIX E
GOLDEN VALLEY BRIEF ON APPEAL
SUMMARY OF ARGUMENT

To establish the district court's abuse of discretion, Golden Valley must show the judgment "is based on clearly erroneous findings of fact or a misapplication or misinterpretation of applicable law or that the ruling evidences a clear error of judgment." *Kingsdown Medical Consultants, Ltd. v. Hollister, Inc.*, 863 F.2d 867, 876, 9 USPQ2d 1384, 1392 (Fed. Cir. 1988). Each of these types of reversible error undermining a proper exercise of discretion was committed by the court below.

It is fundamental that analysis of inequitable conduct issues, like those of validity and infringement, must start with construing the meaning of the claim language in light of the specification, prior art, and testimony of those skilled in the art to whom the claims are addressed. *McGill Inc. v. John Zink Co.*, 736 F.2d 666, 675, 221 USPQ 944, 950 (Fed. Cir. 1984); *Fromson v. Advance Offset Plate, Inc.*, 720 F.2d 1565, 1569, 1571, 219 USPQ 1137, 1141-42 (Fed. Cir. 1983); *Halliburton Co. v. Schlumberger Technology Corp.*, 925 F.2d 1435, 1441, 17 USPQ2d 1834, 1840 (Fed. Cir. 1991). A pervasive error below was that the court failed to carry out this initial inquiry. Instead, it boiled the invention down on its own to a mere idea, gist, or "concept" and broadly mis-defined it as a "susceptor-to-paper laminate." This was reversible error of law. *W.L. Gore & Associates v. Garlock, Inc.*, 721 F.2d 1540, 1547, 220 USPQ 303, 308 (Fed. Cir. 1983); *Jones v. Hardy*, 727 F.2d 1524, 1527-28, 220 USPQ 1021, 1024 (Fed. Cir. 1984). As such, it tainted the court's exercise of its discretion throughout. *PPG Industries, Inc. v. Celanese Polymer Specialties Co.*, 840 F.2d 1565, 1572, 6 USPQ2d 1010, 1016 (Fed.

Cir. 1988); *Platt v. Minnesota Mining & Mfg. Co.*, 376 U.S. 240, 245 (1964).

As a result of its repeated erroneous reliances on the "concept," the court misjudged both the scope of the invention and the materiality of information deemed withheld or misrepresented. Because it disregarded the specification's functional definition of the claim term, "flexible," and the testimony of those skilled in the art as to the clear functional distinction in the industry between flexible packaging and paperboard cartons, the court could not distinguish between Golden Valley's flexible laminate invention and James River's paperboard technology which it thought Golden Valley had "unlawfully" patented. Because it disregarded the claims' requirement that the susceptor be made of a "dimensionally unstable plastic film," the court did not see that prior art such as Winters '427 and Borek '573 disclosed neither the problem which confronted Golden Valley's inventors, nor their solution thereto, and thus was understandably thought immaterial by Golden Valley.

The court's erroneous perception of the invention as being a "susceptor-to-paper laminate concept" also clouded its analysis of the comparative test structures and the test results reported in Golden Valley's applications, and the materiality of the James River litigation.

These misjudgments, cascading from the central errors of failure to properly construe the claim language and failure to measure pertinence of "withheld" or "misrepresented" information against the claimed invention and information that was cited, erroneously served as the bases for the court's inference of intent to deceive arising from "too many instances of withholding." When viewed in proper context, there was neither the requisite materiality, nor bases for inferring knowledge of materiality or intent, upon which the court could justifiably exercise its discretion to hold the

patents unenforceable. These grave errors of law are alone enough to warrant reversal. *PPG Industries, Inc. v. Celanese Polymer Specialties Co.*, 840 F.2d 1565, 1572, 6 USPQ2d 1010, 1016 (Fed. Cir. 1988); *Platt v. Minnesota Mining & Mfg. Co.*, 376 U.S. 240, 245 (1964).

It was also error of law for the court to hold that Golden Valley's remedial disclosures, during prosecution of the '765 application, had "absolutely no effect" on judging materiality or intent with respect to information found to have been withheld or misrepresented in prosecuting the '513 application. The fact that the '765 examiner did not apply or otherwise comment on the disclosed information in allowing claims of commensurate scope to the '513 patent is evidence of its immateriality to the '513 application. Golden Valley's disclosing of the information is itself evidence of a lack of intent to deceive. *Kimberly-Clark Corp. v. The Procter & Gamble Distributing Co., Inc.*, 973 F.2d 911, 918, 23 USPQ2d 1921, 1927 (Fed. Cir. 1992). These factors should have been weighed in the proper exercise of the court's discretion.

In a case of first impression, the court also erred in law by holding that remedial disclosures in the '765 prosecution could have no effect in saving the '765 patent from unenforceability. The court's inference of intent based on "too many instances of withholding" made no distinction between what was disclosed in the two applications. Consequently, its inference of deceptive intent in the '765 prosecution based on '513 "withholdings" which had been disclosed to the examiner during the '765 prosecution but not found to be material was error of law without precedent.

In assessing the comparative tests, the court made three errors of fact. It erroneously found there was clear and convincing evidence (1) that "prior art" test structures reported in the '723 and '513 applications were identical

when in fact they were materially different; (2) that inadvertent and immaterial mistakes made in using Golden Valley's commercial bag for the '513 invention test structure were deliberate and materially misleading; and (3) that the '765 comparative tests were deceptively unfair because machine-made invention structures were compared with handmade "prior art" structures when physical samples of the actual test structures in question were demonstrated before the court's eyes to have been handmade.

Each of the above errors is in itself sufficient to taint the district court's exercise of its discretion in finding inequitable conduct rendering Golden Valley's patents unenforceable. Because of the delicate balances of materiality, knowledge, and intent which the district court was required to make, even one such infectious error is fatal to the proper exercise of discretion, because it upsets the balance. *Platt v. Minnesota Mining & Mfg. Co.*, 376 U.S. 240, 245 (1964).

APPENDIX F

Excerpt from Golden Valley's Prior Art Notice of September 5, 1986 to the '513 patent examiner:

PRIOR ART NOTICE

The Examiner's attention is directed to the following items of prior art, copies of which are enclosed.

4,267,420 and 4,230,924	Brastad [General Mills]
3,835,280	Gades [Pillsbury]
4,450,180 and 4,548,826	Watkins [Golden Valley]
4,553,010	Bohrer et al [James River]
4,158,760	Bowen
4,156,806	Teich
4,555,605	Brown [James River]
4,190,757	Turpin et al
4,166,208	Martel
4,398,994	Beckett
Canadian patent	
1,153,069	Seiferth [James River]
2,830,162	Copson
3,302,632	Ficthner (*sic*)
3,783,220	Tanizaki

APPENDIX G

Excerpt from Golden Valley's Information Disclosure Statement of July 1, 1988 to the '765 patent examiner:

INFORMATION DISCLOSURE STATEMENT

The attention of the Examiner in charge of the above noted application is directed to the following references.

The attention of the Examiner is again directed to the references cited in the patent application SN 740,252 now patent 4,735,513, copies of which have already been furnished to the Patent Office. The relevance of those that are pertinent has been explained. It is respectfully requested that these references be transferred to the present application file.

These references include the following patents:

2,830,162	4/1958	Copson et al.
3,302,632	2/1967	Fichtner
3,783,220	1/1974	Tanizaki
3,835,280	9/1974	Gades et al. [Pillsbury]
4,156,806	5/1979	Teich et al.
4,158,760	6/1979	Bowen et al.
4,166,208	8/1979	Martel et al.
4,190,757	2/1980	Turpin et al.
4,230,924	10/1980	Brastad et al. [General Mills]
4,267,420	5/1981	Brastad [General Mills]
4,390,588	6/1983	Ebneth et al.
4,398,994	8/1983	Bechett
4,450,180	5/1984	Watkins [Golden Valley]
4,548,826	10/1985	Watkins [Golden Valley]
4,553,010	11/1985	Bohrer et al. [James River]
4,555,605	11/1985	Brown et al. [James River]

4,641,005	2/1987	Seiferth [James River]
3,678,882	7/1987	Bohrer et al. [James River]

* * *

The attention of the Examiner is also directed to the following references.

* * *

Patent 4,283,427 describes a microwave heating package for heating foods such as pizza, french fries, popcorn and the like having a microwave interactive susceptor pouch 34 composed of silicone coated parchment sheets 36, 38 with its peripheral edges bonded together ... .

* * *

The applicant is also aware of two prior art products that are now or have been in commercial use. The first is the product substantially as described in Figures 1-4 of patent 4,678,882 which has a microwave interactive panel 4 measuring approximately 2 x 4¼ inches bonded by means of adhesive to the inside of a paperboard carton. This package was sold under the registered trademark Wyandot. The interactive sheet is a layer of plastic resinous film coated with a semiconductive layer of a metal. The coated film was in direct contact with a food product placed in a carton. ...

The second product in public use appeared to consist of the same material as that just described, namely a layer of plastic resinous material believed to be polyester vapor coated with a layer of a semiconductive metal (aluminum). This coated plastic film was bonded to a piece of paperboard

and placed in a package (a paperboard carton) for storing, shipping and heating a pre-cut slice of pizza. ...

Excerpt from Golden Valley's Supplemental Information Disclosure Statement of February 13, 1989 to the '765 patent examiner:

The Examiner's attention is also directed to the following items in prior commercial use.

(1) The James River Corporation has marketed a heating sheet or pad composed of a sheet of paper or paperboard to which is laminated on the upper surface a sheet of vacuum metallized polyester film that is semiconductive and becomes hot in a microwave oven. Sheets of this kind have been used as a support for heating pizza in a microwave oven. ...

(2) Heating sheets of the type described in paragraph (1) above have been used in pizza cartons such as those sold under the brand name Totino's. ...

(3) Heating sheets of the kind described in (1) above were also used by the Wyandotte (*sic*) Corporation in a popcorn container of the same shape and proportions as shown in Figures 1-6 of Patent 4,678,882. ...

APPENDIX H

Excerpt from an October 13,1986 Declaration filed on behalf of James River Corporation in its Seiferth '005 patent application:

17. James River tests as outlined above have led me to the firm conclusion that the concept of a very light weight, highly flexible food wrap as taught in the Brastad patent [General Mills] is not commercially operable because

(a) a highly flexible wrap when brought into contact with the irregular surface of a food product creates a mass whose microwave characteristics are unpredictable,

(b) excessive heating may occur at certain spots where the flexible wrap becomes overlapped,

(c) without a semi rigid or rigid substrate to support and maintain the shape of the interactive layers, thermal discontinuities lead to contortions and wrinkling of the wrap and cause disruption of the heat transfer relationship between the interactive layers and the surface of the food product, ...

APPENDIX I

Excerpt from the 1-31-92 Trial Testimony of Golden Valley's technical expert, Charles Turpin:

Q. Now will you explain to the Court how you determined the manner of making that bag, that is handmade versus commercial lamination?

A. Yes. I can see the machine-printed adhesive and it's reasonable to believe that Larry did what he did here because it's exceedingly hard to get this pattern of adhesive by any means. So you start from the machine-made base sheet.

Now, when you look at the edges of the material -- and I can pass it to Your Honor. ... If you look closely at the sheet, what you'll see is that there's a cutout of the overlying greaseproof.

And what Larry did, what he testified he did, and what I believe he did, is he glued this (Indicating) layer of polyester, the patch you see there, to the underlying base structure.

And then he glued this sheet of greaseproof (Indicating) over the whole thing. And he very carefully cut it out to make as precise a sample as he could. And you can see that cutout in each one of these samples.

And if you look real close at some of these bags, you can see it's not perfectly in (Inaudible). And, in fact, some of the glue slides underneath the overlying greaseproof.

THE COURT: So to get to the point, this witness has concluded that all of the samples here, in fact, were handmade, with the prior art structure having the handmade or hand-applied metallic polyester?

THE WITNESS: Yes, sir.

THE COURT: And the invention -- the invention structure being handmade with the greaseproof paper being applied over the metallized polyester as you've described?

THE WITNESS: Exactly.

APPENDIX J

Excerpt from Golden Valley's Patents in Suit:

In view of these and other deficiencies in the prior art it is the general objective of the present invention to provide an improved flexible sheet for packaging purposes and for producing heat in a microwave oven with the following characteristics and advantages:

* * *

(c) sufficient flexibility to be wound, unwound, transferred either as cut sheets or a continuous film or formed into package structures such as bags and the like on conventional processing and gluing equipment used for packaging films and paper,...